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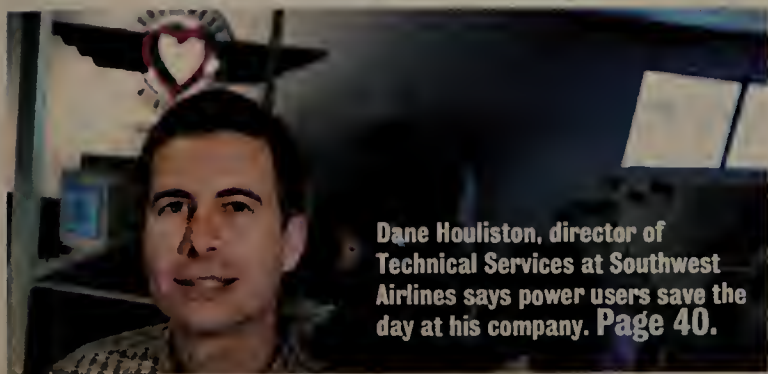
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# NetworkWorld

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Leading-edge retailers are using supply-chain management tools to boost efficiency and reduce costs.
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### Review

SOHO routers offer easy setup, built-in security and remote management capabilities for less than \$1,000. **Page 37.**

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## Interactive

### Buyer's Guide: SOHO routers

The most difficult part of setting up a small office/home office network is picking which router to use to connect multiple PCs to a single broadband connection. To help, we've compiled this downloadable list of 52 different SOHO routers from 14 vendors.

**DocFinder: 9741**

### Forum: What do you want from Cisco?

We asked die-hard Cisco customers how the company could improve. They made several suggestions. Now it's your turn.

**DocFinder: 9742**

### SuperComm 2002 Weblog

Get the real scoop from Atlanta with our Weblog. Edge Managing Editor Jim Duffy and Senior Editor Tim Greene give you the news straight from the show floor.

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## Seminars and Events

### State of Security: Your way toward a safe net

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## Columnists

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Keeping spammers at bay  
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### Help Desk

Two operating systems, one machine  
Columnist Ron Nutter helps a reader who wants to run Windows XP and 2000 Server on the same machine.

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More cuts at Nortel  
Edge Managing Editor Jim Duffy says the optical reorganization will cost 3,500 jobs and the company's components business might be sold.

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We've made it easy to access articles and resources online. Simply enter the four-digit DocFinder number in the search box on the home page, and you'll jump directly to the requested information.



# News Bits

## WorldCom to stop reselling wireless

■ WorldCom last week revealed plans to leave the wireless resale business, which company officials say has been unprofitable. The announcement came amid rumors that WorldCom is preparing to lay off as many as 16,000 of its 80,000-member workforce. WorldCom's wireless resale business took in about \$1 billion last year from 2 million customers. The company says several carriers are interested in buying the wireless business.

## Military urged to increase IT security

■ Loose lips sink servers? In a move that harkens back to the World War II "Loose Lips Sink Ships" campaign, the National Security Agency last week launched a series of ads urging military personnel to protect national secrets as the nation engages in its global antiterrorist effort. The colorful posters feature military personnel at work with the words "Information Security Begins With You." The ads are running primarily in military-focused publications, such as *The Army Times*, and will be hung on the walls in military facilities.

## NFR Security founder leaves company

■ NFR Security last week confirmed that founder and CTO Marcus Ranum has left the firm to pursue outside interests. NFR Security CEO Jack Reis, denying reports that Ranum had been pushed out, says Ranum "felt he was no longer contributing positively to the company." Ranum, long credited as a pioneering inventor in the area of intrusion-detection systems, could not be reached for comment.

## HP may sell middleware to Oracle

■ Oracle is in discussions with Hewlett-Packard to buy its middleware assets, which could provide a needed boost to Oracle's application server business, industry sources say. HP disclosed last week that it plans to "retire" its middleware assets as part of an effort to achieve profitability in its software group. HP officials declined to elaborate, saying the company will provide details about its strategy at a customer event later this month in Seattle. HP's middleware includes products it acquired from Bluestone Software in 2000 — including a Java 2 Platform Enterprise Edition application server, transaction server and various XML tools — in a deal valued at about \$470 million.

HP's middleware also includes its eSpeak software for building network-based services and its Process Manager business-modeling tool.

## Velocita files for bankruptcy

■ Network builder and telecom services provider Velocita has filed for Chapter 11 bankruptcy protection. The Falls Church, Va., company has been building a nationwide OC-192 network that is almost complete. The company's primary business has been selling services to other service providers, although it also did have enterprise offerings, including a VPN service. In addition to building its own network, Velocita has worked on AT&T's next-generation network. Cisco was a major backer of Velocita, having purchased \$200 million in Velocita stock in May 2001 and providing up to \$285 million in financing.

## Sun patches holes in Solaris

■ Sun has released a patch that closed two security holes in its Solaris operating system. The holes could have let an attacker take control of vulnerable systems, the company says. The vulnerabilities affect the snmpdx and mibiisa agents that are components of Solaris Versions 2.6, 7 and 8. The agents run with root privileges, the highest level of access on systems, and are part of the operating system's SNMP capabilities. The capabilities allow for device configuration and administration. The snmpdx agent monitors SNMP requests and information from the system and forwards relevant information to mibiisa. The vulnerabilities come in the form of a format-string vulnerability in snmpdx and a buffer overflow

## ■ The Good The Bad The Ugly



**Score one for the customer.** The U.K. government says it signed a licensing agreement with Microsoft earlier this year that it estimates will save taxpayers \$147 million over the next three years. Government agencies negotiated the deal as a group after finding huge discrepancies between what different departments had been paying. Emboldened by the deal, the government is now even looking at open source software to complement or replace some of its Microsoft software.



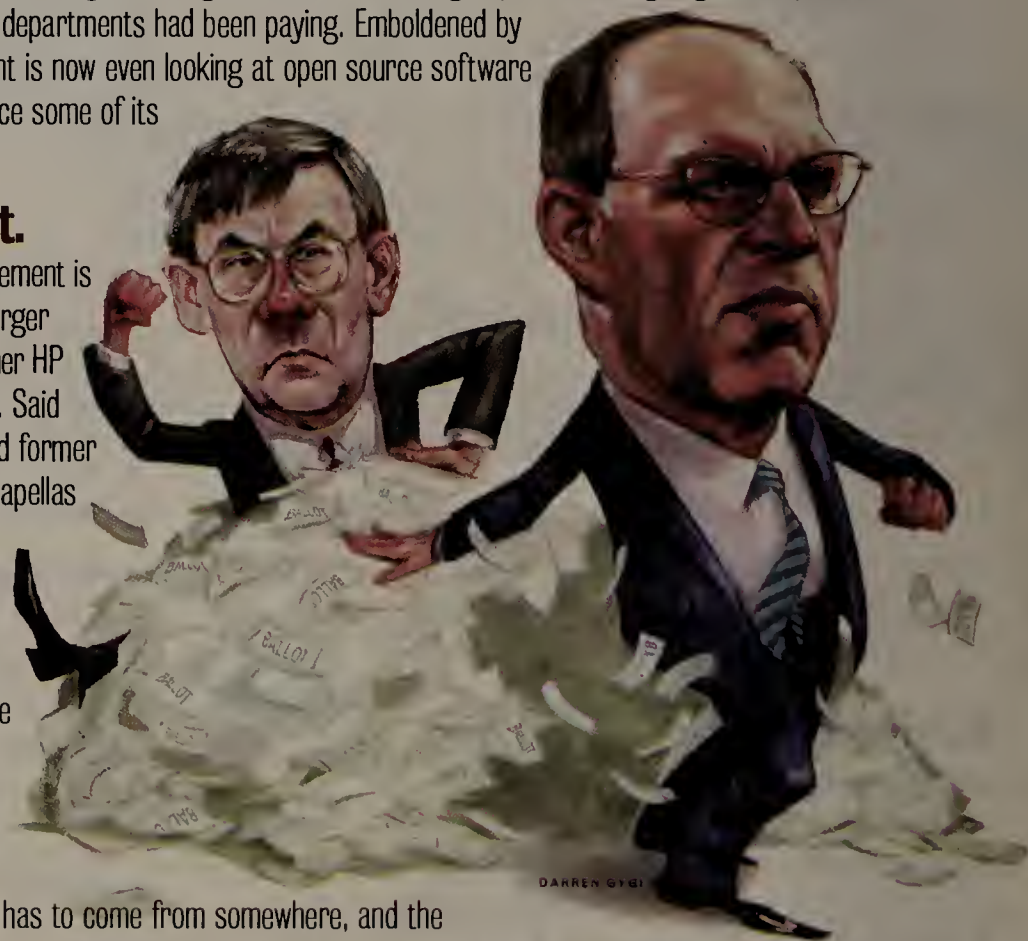
### Not over it yet.

Hewlett-Packard management is still bitter about the merger approval battle with former HP director Walter Hewlett. Said HP's new president (and former Compaq CEO) Michael Capellas at the start of a presentation to analysts last week: "It's amazing how much you can get done when you don't have to count votes. It's extraordinary." ➤



### Fun and games?

The time has to come from somewhere, and the trade-offs can't be good. A new report from consulting firm DFC Intelligence predicts a sixfold increase for online game playing by 2006.



## COMPENDIUM

### Jabbering away

**AOL Instant Messenger? That is so '90s. IBM has posted a paper on using Jabber, an open-source, XML-based instant-messaging client in enterprise and e-commerce applications.**

**Find it and other stuff you gotta see on Compendium at: [www.nwfusion.com](http://www.nwfusion.com), DocFinder: 9744.**

in mibiisa. The flaw is mitigated because the vulnerabilities only exist on systems running Sun Solstice Enterprise Master Agent, snmpdx and mibiisa.

## IBM sheds another 1,500 jobs

■ IBM announced more layoffs last week, this time in its microelectronics unit, which manufactures and distributes memory, storage network and PowerPC chips. A total of 1,500 jobs, representing 7.5% of the approximately 20,000 employees in the microelectronics unit, will be cut. IBM's microelectronics unit is spread across three main locations: East Fishkill, N.Y.; Burlington, Vt.; and Endicott, N.Y. IBM announced layoffs at four manufacturing plants two weeks ago. IBM also announced the sale of its hard-disk manufacturing processes to Hitachi last week, creating a new company owned mostly by Hitachi.





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# VeriSign to give BIND the boot

■ BY CAROLYN DUFFY MARSAN

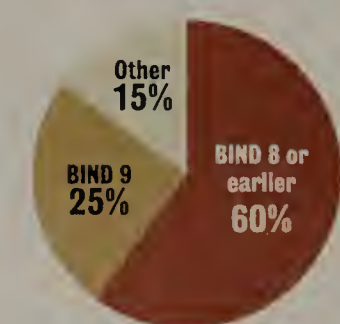
VeriSign is upgrading the directory and database software that underpins most Web site lookups in a move that experts say will help improve the security and reliability of the Internet's DNS.

VeriSign is replacing an open source software package called Berkeley Internet Name Domain (BIND) with its own proprietary technology. Dubbed ATLAS, for Advanced Transaction Look-up and Signaling, VeriSign's proprietary software will be installed in its 13 DNS server sites around the globe this summer and will go into production mode in the fall.

BIND, which runs on most corporate domain name servers, translates domain names into numerical IP addresses. Developed in the early 1980s, BIND lacks robust security and scalability. Last week, CERT warned that a flaw in certain versions of BIND could leave parts of the Internet vulnerable to denial-of-service (DoS) attacks.

## DNS breakdown

Percentage of publicly accessible domain name servers using the following:



SOURCE: NOMINUM

With ATLAS, VeriSign says it will improve its protection against distributed DoS attacks along with the speed and reliability of lookups.

"The major focus of ATLAS is reliability, scalability and flexibility for conversions," says Aristotle Balogh, vice president of engineering at VeriSign Global Registry. "Some of the performance improvements come from innovative algorithms for lookups

and updates."

DNS experts say VeriSign's move to ATLAS will help fix a DNS environment that is too homogeneous.

"Having everyone run the same name server is a screaming invitation for bad things to happen," says David Conrad, CTO at Nominum, a DNS service provider. "There has been a push in the root server community as well as the top-level domain [registry] community to try to get people to diversify. This way a single DoS attack wouldn't take out all the name servers."

VeriSign is the latest domain name registry to migrate away from BIND. Others that are choosing alternatives include the operators of the new .coop, .aero and .info registries, which selected software from Nominum, and Ripe Network Coordination Center, which is writing its own DNS software.

"There is a greater diversity of products available to provide DNS services and products,"

Conrad says. "That trend will continue as we get more special products to deal with special needs."

VeriSign's shift to ATLAS shouldn't affect DNS interoperability, says Ray Plzak, president of the American Registry for Internet Numbers and co-chair of the Internet Engineering Task Force's Domain Name Server Operations working group.

"The only standardization is in the IETF's [requests for comment]," Plzak says. "It just so happens that BIND is used by everybody. But as long as people implement to the standards, it shouldn't matter what software they use."

VeriSign's ATLAS software has been under development for 18 months and cost the company several million dollars, officials say. Key features are:

- Scalability from an average of 6.5 billion DNS queries per day today to a projected 100 billion queries per day with 10-msec response time.
- Ability to propagate updates to DNS information in 6 seconds

vs. 12 hours today. This will let network managers make near-instantaneous changes to DNS information and be assured of Web site availability.

• Next year it will support not only DNS lookups but also emerging protocols such as Session Initiation Protocol and Signaling Series 7 for Internet telephone calls.

While it rolls out the new software, VeriSign also is upgrading its servers and network architecture. The company is installing new routers, switches and load balancers from Cisco, Alteon and Foundry Networks. New servers are from IBM and Intel.

Meanwhile, CERT's latest advisory about BIND affects all but the most recent version of BIND 9, which was released in May. DNS servers running software prior to BIND 9.2.1 are vulnerable to attacks that can shut down DNS service by sending a specific packet, CERT said. The service remains unavailable until restarted. ■

## Microsoft

continued from page 1

scheme, under which the company is looking to supply software as services.

TrustBridge's major limitation — as even Microsoft acknowledges — is that it works only between companies running Microsoft's Active Directory or between Active Directory and Kerberos 5 Key Distribution Center (KDC) servers.

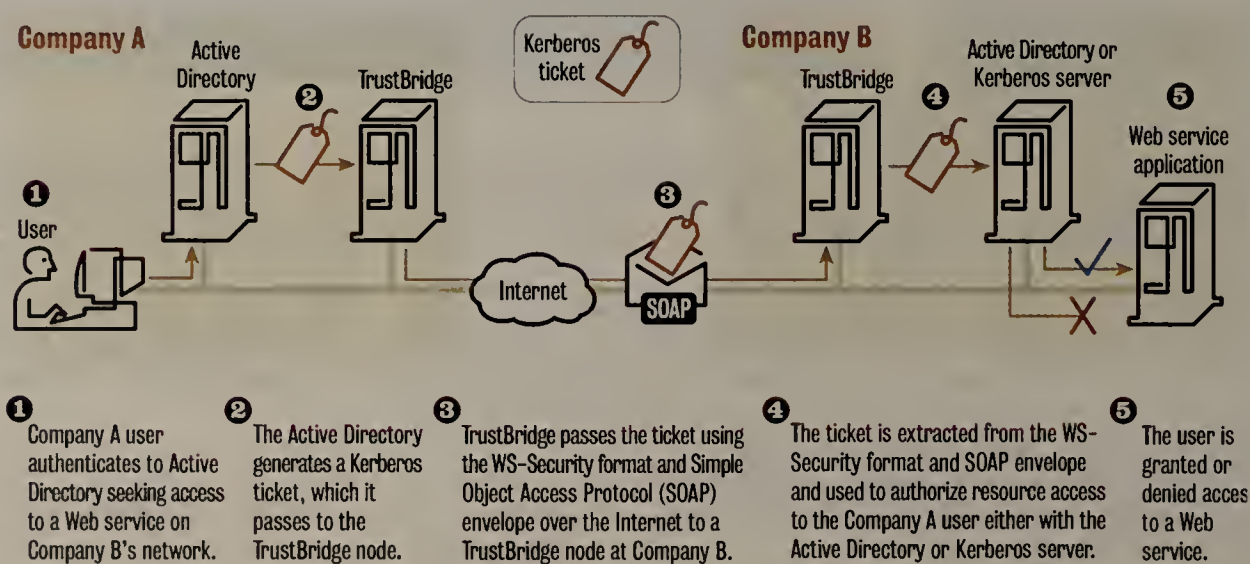
What's more, even though Kerberos support seems to move TrustBridge away from solely a proprietary Microsoft technology, there have been ongoing problems integrating Unix-based Kerberos services with Microsoft's implementation of Kerberos 5.

Even as TrustBridge might begin to solve technical issues, observers say it ignores the cultural issues involved in establishing policies and procedures for creating trust between companies.

"It is a huge change in the culture of IT to move to a centralized identity management structure," says George Defenbaugh, manager of global IT infrastructure projects for Amerada Hess, an integrated petroleum company in New York City that is crafting a directory environment with multiple instances of Active Directory. "We've been having conversations on just how to set this up across

## Building trust

Microsoft says its new TrustBridge technology will work with Active Directory to make for secure Web services transactions.



multiple forests. Security by its very nature is complex."

Critics say another shortfall is that TrustBridge does not support Security Assertion Markup Language (SAML), a Web services protocol to foster interoperability among disparate authorization and authentication systems that is slated for standards ratification next month by the Organization for the Advancement of Structured Information Standards. SAML-based products are expected to roll out in the next six to eight months, mostly in Web access management products, such as those from Oblix and Netegrity.

"TrustBridge is a move in the right di-

rection for Microsoft, but it is still overlooking interoperability with all those organizations that will be using SAML," says Dan Blum, an analyst with The Burton Group. "Microsoft should include SAML in TrustBridge; these security environments should not roll out as two different worlds."

Other observers concur.

"They are going to have to support other Web services protocols and play with the niche security vendors like Netegrity," says Cate Quirk, a research analyst with AMR Research.

"You have to ask some questions, like what about

X.509 [digital] certificates and [public-key infrastructure]," says Laura Koetzle, an analyst with Forrester Research. "Microsoft is seeing the world as all Kerberos and Active Directory."

Microsoft says WS-Security will evolve to support other authentication services, often called identity management, including those promoted by the 40-member Liberty Alliance effort led by Sun.

"It's a crawl, walk, run strategy, and this is [the crawl part]," says Steven VanRoekel, director of Web services technical marketing for Microsoft. He declines to say when the "walk" and "run" parts of the strategy will emerge or how the company will price and package TrustBridge.

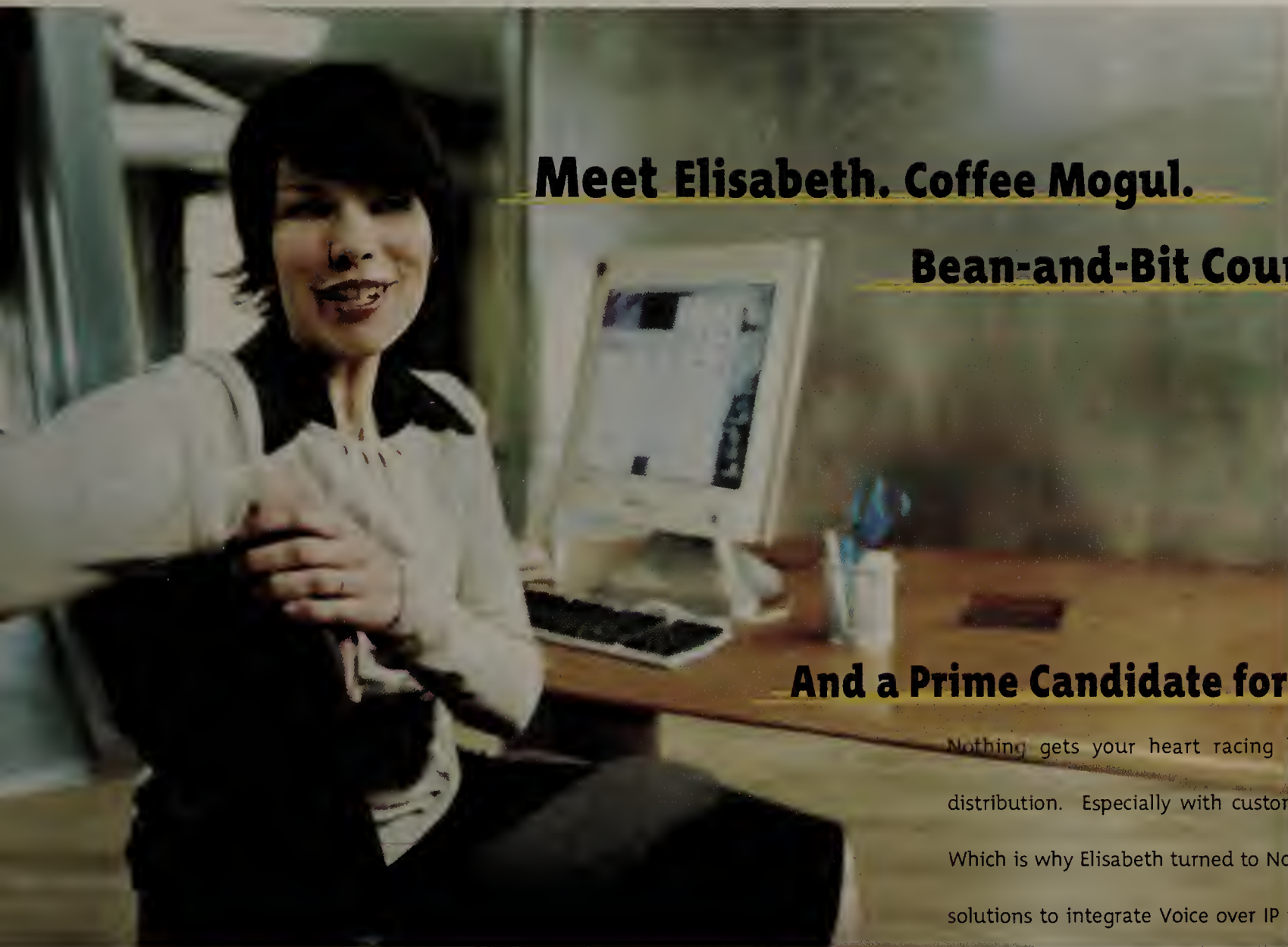
Microsoft says TrustBridge will act as a gateway using Kerberos to speak to Active Directory or a Kerberos KDC server on an internal network (see graphic, above). TrustBridge then employs WS-Security to tuck Kerberos tickets inside SOAP messages that can be sent over the Internet to other TrustBridge nodes or nodes that support WS-Security.

Currently, no software exists that supports WS-Security. IBM announced last month support for WS-Security in the next version of WebSphere, due for release in the fall. Microsoft plans to release TrustBridge sometime next year, after it ships Windows .Net Server. ■



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# Tivoli touts Web services management

■ BY DENISE DUBIE

WASHINGTON, D.C. — The management and security of Web services dominated talk at Tivoli Systems' annual user conference last week, with the company promising to keep pace with this rapidly evolving technology.

The 525 Planet Tivoli attendees heard details of how the company's software currently manages the JavaBeans that make up emerging Web services. Tivoli also touted its support for key Web services standards such as Simple Object Access Protocol (SOAP), and Universal Description, Discovery and Integration (UDDI).

For example, a relatively new product announced in April, IBM Tivoli Service Level Advisor, will let network managers track how well a service is delivered to end users by monitoring all the components making up the application, the company says. The prod-

uct can pull data from multiple sources and track response times across databases, Web and application servers, and other network devices tied to the service. It follows the entire process from user request to service delivery, a precursor to Web services, Tivoli says.

"Tivoli software can manage the beginnings of Web services within a firewall today," says Rich Ptak, analyst at Ptak & Associates. And Tivoli "is letting users know that when they take that leap to Web services, the company will be ready to support them with management products."

In terms of technology, General Manager Robert LeBlanc says Tivoli and IBM will work with others in the industry to set standards for securing and managing Web services. Representatives from both companies are working with security standards groups to help the industry reach common ground sooner, because



**“Web services is not going to be a revolution. It will be an evolution. . . We’re all a couple of years way from this.”**

**Robert LeBlanc**  
General manager, Tivoli

he says “security is the No. 1 issue for users” when it comes to Web services that extend outside a corporate firewall. Second to security is management.

“Web services is not going to be a revolution. It will be an evolution,” LeBlanc says. “The definition will grow and become more layered over time, just as TCP/IP did, and users and vendors will first understand and then deploy. We’re all a couple of years away

from this.”

One Tivoli customer says while the idea of Web services has merit, he also can see obstacles.

“The vendors will have to make all their stuff talk to each other after the standards groups define a standard,” says Steven Krapes, a technical manager for AT&T Labs. “But even then the standard will be totally useless unless vendors make their Web services products exactly the same.” ■

# Big Blue takes WebSphere vertical

Application-integration middleware for five industries on tap from IBM.

■ BY ANN BEDNARZ

SOMERS, N.Y. — IBM is continuing its full-court application-integration press, this time with a roster of industry-specific WebSphere suites that are aimed at making application-integration projects less complex and time-consuming for businesses.

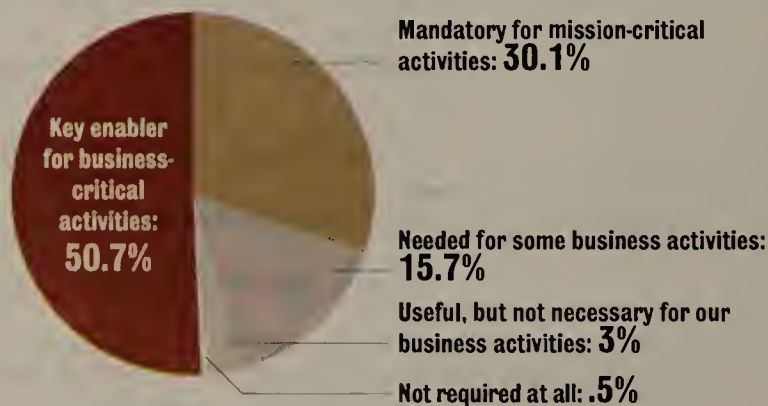
The new offerings, due out next quarter, build on IBM's WebSphere Business Integration suite and add extensions tailored initially for companies in five industries: automotive, electronics, insurance, retail/distribution and telecommunications.

IBM will announce the vertical application suites this week. The news follows a series of announcements IBM made last month about plans to unify its extended WebSphere software family, including its MQ message-oriented middleware, application server and portal lines.

The forthcoming Business Integration suites feature software for connecting third-party software and prebuilt, industry-specific business process templates, which IBM calls collaborations. The templates describe how common business processes — crossing multiple applications and systems — might be accomplished. For example, a template in the insurance suite addresses how a medical claim passes from a hospital to an insurance provider. And a retail template for item management lays out how retailers can exchange

## Integration expectations

The importance of enterprise integration varies among 1,096 respondents to a survey conducted by IDC.



item data with trading partners in accordance with Uniform Code Council standards.

For customers, one advantage of having bundled industry-specific templates is ease of deployment. IT departments want products that more closely match the business problem they're trying to solve, says Tyler McDaniel, director of application strategies at Hurwitz Group. The closer the match, the less a company needs to rely on a third-party consultant for customization services, he says.

IBM is not the first integration middleware vendor to announce vertical packages. Vitria in February unveiled four industry-centric products, called Vitria Collaborative Applications, for healthcare, financial services, utilities and manufacturing.

And Tibco Software in March announced

plans to add industry-specific business processes to its core BusinessWorks and ActiveEnterprise suites. Tibco's products target the financial services and utilities industries, along with manufacturing, through a partnership with systems integrator and software maker Sierra Atlantic; and oil and gas, through a partnership with IT consulting firm ZettaWorks.

In addition to the vertical extensions, WebSphere Business Integration suites include WebSphere MQ Integrator Broker, which provides the messaging infrastructure; MQSeries WorkFlow, which includes tools for creating custom business process templates;

and IBM CrossWorlds InterChange Server, which provides the prepackaged process templates.

The software operates on IBM AIX, Microsoft Windows 2000 and Sun Solaris. Pricing starts at \$62,000; a typical large enterprise deployment can cost in the \$500,000 range, IBM says. ■

## Correction

■ The story “Z Tel gets an edge with SnowShore media server” (June 3, page 42) should have listed the company's full name as Proficient Systems.

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invent



# Grid computing hits security gridlock

■ BY DENI CONNOR

Doubts about the security of grid computing — serious enough to stifle adoption — are being addressed head-on by Sun and the Global Grid Forum.

Sun last week introduced Grid Engine, Enterprise Edition 5.3, software that lets IT managers build grid nets within an organization and control policies and service-level agreements (SLA).

GGF, a standards-setting body, recently made proposals that extend the X.509 public-key infrastructure and attempt to resolve problems between companies that use separate authentication mechanisms and policies.

Sun says adoption of global grids, where companies share hardware and software resources to accomplish a computational goal, has been slowed because of security concerns

and a lack of standards.

"It can be illustrated by one question: If you were the CEO of a big company, would you be comfortable sending your intellectual property across the Internet to a third party who might be working with your competition?" asks Peter Jeffcock, a Sun product manager. "Right now, the security and bandwidth issues ... are not in place to the extent that most organizations are prepared to do

that on a production basis."

At least one user involved in grid development understands the problem of intercompany and private grids.

"We've been using Sun's Grid Engine within the Supercomputer Center, so a lot of our systems have had the luxury of having common name spaces," says Eric Stahlberg, senior systems manager at the Ohio Supercomputing Center in Columbus. "When we have had to work with other organizations, we have been in an exploratory research level."

Stahlberg says that although he used tools from the Globus Project, a research and development effort focused on grid computing, other tools that map a company's security or policy-setting means to another's aren't there. "As far as heterogeneous grid computing goes, it is a gray area where things are ill-defined," he says.

Sun introduced its Grid Engine software nearly two years ago when it acquired GridWare. Grid Engine is used for building intercompany, and internal, private grids.

With Grid Engine, Enterprise Edition, Sun avoids the security issues associated with external grids. The company has added a policy manager that can control SLAs. Sun says the software is for use within corporate firewalls, where departments likely use the same security, policies and SLAs.

"We set up a policy within the Sun software that says this [department] has access to the machines for this amount of time during the day or calendar period," says Tom Kerr, a software development director at Synopsys in Mountain View, Calif.

Synopsys has grids running Unix and Linux, the largest of which consists of 200 Linux servers and workstations.

Meanwhile, members of the GGF Security Working Group (GGFSWG) are attacking the problem of interorganization security that Sun says concern its customers.

Steve Tuecke, software architect at Argonne National Laboratories in Darien, Ill., and co-chair on the GGFSWG, says that some organizations might use Kerberos, while others might have Unix logons, home-grown policies or scheduling systems from Platform Computing or Sun.

Tuecke, along with others involved in the GGF, have submitted

drafts to the Internet Engineering Task Force (IETF) and GGF in an attempt to solve these problems.

Standardization of some of the GGF proposals is expected in as little as six months.

"We are identifying and modifying existing security solutions, such as Kerberos, to better facilitate cross-organization operation," says Marty Humphrey, research professor at the University of Virginia in Charlottesville, and co-chair of the GGFSWG. "We are also creating new technologies such as [Globus'] Global Security Infrastructure [GSI] within the GGF that build on and define new, standardized approaches for security."

GSI provides for secure communication and single-sign on between grid participants, but avoids a centrally managed security system.

The GGF points to policies and SLAs as sticking points for building grids between organizations.

"The harder issue is how one deals with policy — organizations might want to impose different policies on who can access their resources," says Clifford Neuman, senior research architect at the University of Southern California and co-author of a grid security draft to the IETF. "Ultimately, it is the owner of the resource that has to make such a decision, but this means you might have a computation running across machines in different domains, enforcing different policies."

Sun Grid Engine, Enterprise Edition costs from \$20,000 for up to 50 CPUs to \$80,000 for up to 2,000 CPUs. ■

## Conference

continued from page 1

revenue," said Gartner analyst Jane Disbrow, whose focus is on enterprise resource planning (ERP) software, which is often a multimillion-dollar purchase. She noted that only Oracle published ERP prices openly.

In the tough economic climate, vendors are aggressively pushing "all-you-can-eat deals" in which corporations buy every suite the vendor has at a "discount," although the software might sit on the shelf while support costs skyrocket, Disbrow said. While there seems to be a discount for the initial license, the complex contract terms are leading to higher annual maintenance costs that purchasers are expected to pay over the life of the contract for use of the software.

"A few years ago the maintenance averaged 17% of the initial license, but now it's 20% and rising to 21.3%," Disbrow said. Vendors are coming up with new elaborate pricing models based on business metrics, such as charges based on a percentage of the corporate revenue or "role-based" usage where there's no clear definition in the contract of what the term really means. These types of tactics were observed with PeopleSoft, Oracle and SAP, she noted. Gartner analysts recommend that corporations keep their cards close to their vest and reveal as little as possible about their IT budgets when negotiating with any vendor.

According to a Gartner survey of 600 companies, many corporations appear to be spending more on IT as a percentage of their corporate revenue. Banks, the biggest investors in IT per industry, last year spent an average 13.5% of their revenue on IT assets. And ERP spending as a percentage of the IT budget, according to

## Getting the best deal

**At a Gartner conference last week, more than 700 IT managers shared ideas on keeping costs down on software and hardware licensing.**

- Do a competitive request-for-proposal whenever possible.
- Be prepared with a complete IT assets list compiled jointly by IT, finance and human resources.
- Resist the lure of low initial licensing fees with overly complex maintenance terms.
- Plan for costs associated with equipment "retirement."

Gartner, hovers at 25% for most industries, with wholesale distributors spending more than 40%.

"We're spending \$50 million to \$100 million in the next few years on ERP projects for the 300 hospitals we support," said Steve Fox, assistant vice president of IS at healthcare giant HCA.

IT managers have to prepare to negotiate hard so they don't see their real costs doubling over the course of a three- or five-year contract because of maintenance fees, Disbrow said. There should be clauses in contracts to assure predictable costs when the number of employees rises or falls.

In what Disbrow called "revenue mining," vendors are trying to hook buyers into contracts where software costs are linked to the consumer price index each year — which to them might mean a periodic 8% or 12% boost in price.

When software prices are published, these might only be a starting point for negotiations. Microsoft's four-tier pricing for Microsoft Office offers 45% off of the \$179 retail price. But Gartner analyst Alvin Park said he's seen large organizations get a 10% discount

and more below that. An IT administrator for a Catholic school in Pennsylvania, who asked to remain anonymous, said she was paying \$50.

Much of the difficulty in managing IT assets is just getting a handle on the hardware and software that's owned or leased.

In a candid presentation, Motorola's corporate vice president for IT strategy and architecture, Toby Redshaw, said Motorola is cleaning up the excess of software, hardware and data centers it accumulated in the go-go years of the 1990s.

"I have one business unit with 25,000 applications that we know of," Redshaw said. "Of course, the financial people are very upset about this."

Redshaw estimates Motorola has between 10,000 to 20,000 servers and 173 data centers. With help from the finance department, which Redshaw sees as critical, Motorola intends to lower its spending by 20% to 30% over the next five years. Redshaw also is counting on Web services to play a key role in connecting with Motorola's 1,500 suppliers.

There are plenty of auto-discovery tools to find the long-forgotten desktops and servers, including tools from Microsoft, Network Associates, Peregrine andBindView. But in the separate category of IT asset management software, which are complex data repositories developed by at least a dozen vendors, Gartner doesn't recommend any particular one.

"We recommend you build your own if you have the skills and financial resources," said Gartner analyst Patricia Adams, mainly because the financial stability of many IT asset management vendors in this segment is so shaky. ■



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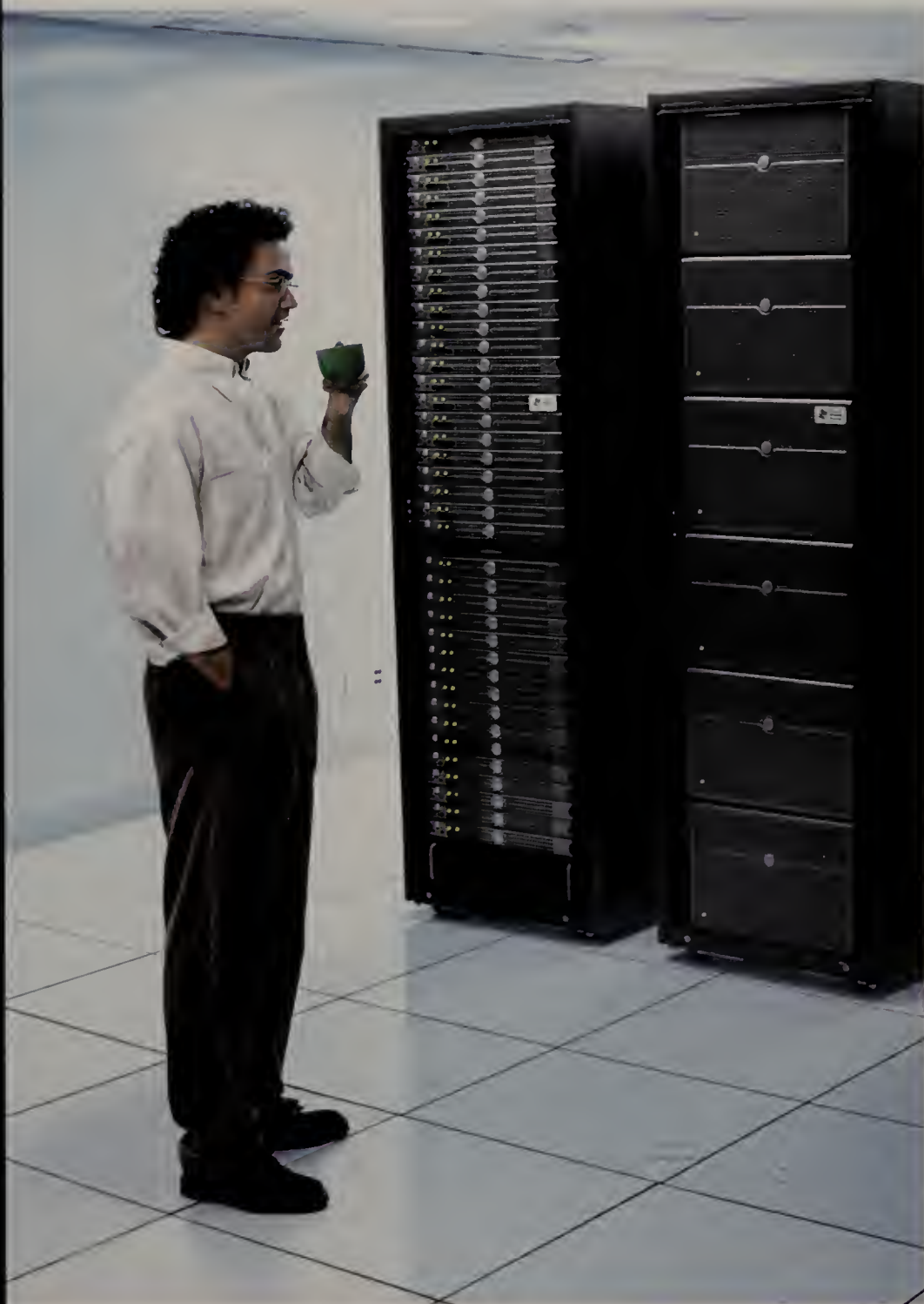
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Microsoft is a member of the Web Services Interoperability Organization, an open industry effort to promote Web services interoperability across platforms, applications, and programming languages. To learn more about WS-I, its members, and its implementation tools, visit [ws-i.org](http://ws-i.org)





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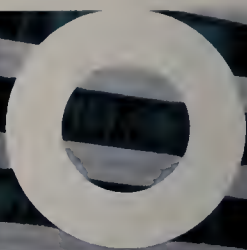
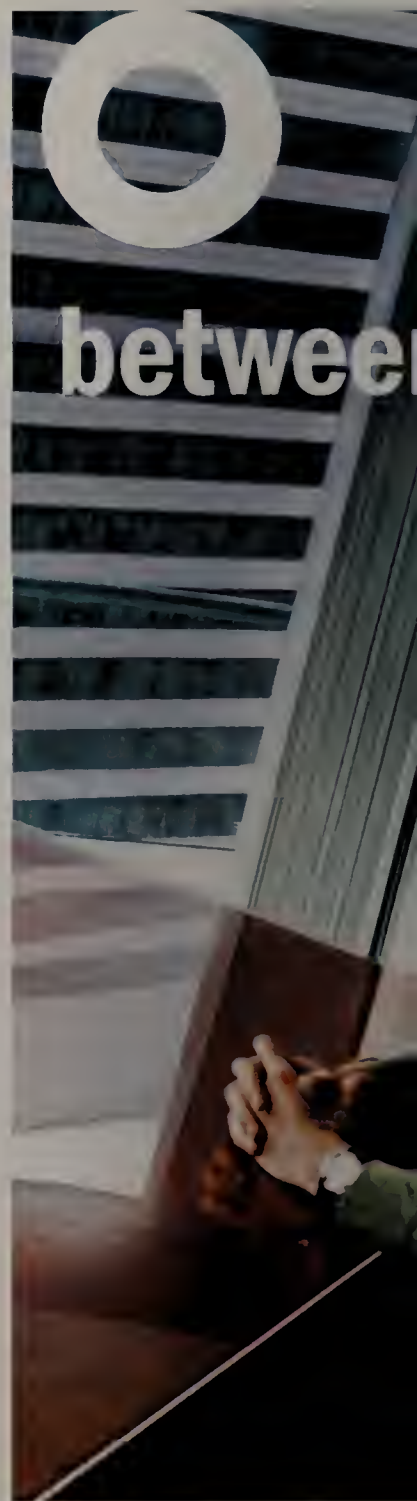
*"If one word best represents the past year's most significant news story in software development, it would be .NET. If you were to look for two words, they would be 'Web services.'"*

—SD Times, "Web Services, .NET Highlight 2001," Alan Zeichick, 1/1/2002

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—Peter Osbourne, Group Manager, Advanced Technology Group, Dollar Rent A Car

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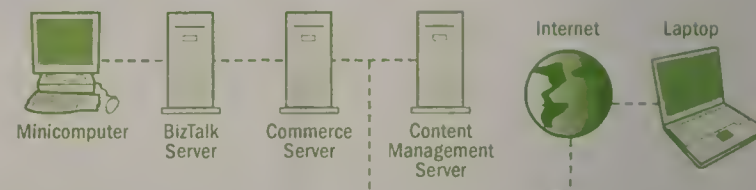
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**How Royal Canadian Mint used .NET connected software to create new revenue streams.** Founded in 1908, the Royal Canadian Mint was looking for new and better ways to reach out to customers for its evolving catalog of precious metal collector coins and jewelry. With .NET connected software they were able to create a next-generation e-commerce site that delivered dynamic content management, personalization, and advanced business analytics while drawing on information in a legacy database and feeding orders through an existing ERP system. Microsoft BizTalk® Server 2000, with native XML support, integrated the data seamlessly for smoother transactions and more efficient order processing. To see a webcast on redefining the online enterprise, visit [microsoft.com/solutions/msib](http://microsoft.com/solutions/msib)

**How Dollar Rent A Car used .NET connected software to drive new business partnerships.** Dollar Rent A Car is a world-leading car rental agency, with a fleet of 75,000 cars and more than 250 locations across 26 countries. They saw that integrating their VMS-based reservation system directly with partners would drive sales and reduce the cost of transactions. Using .NET connected software and BizTalk Server, they were able to develop an XML-based trading partner integration solution in weeks rather than months—a 75 percent reduction in development time. The same solution also helped Dollar to significantly reduce transaction costs with its partners. To get a resource and evaluation kit for this case study, go to [microsoft.com/business/casestudies/b2c/dollarrentacar.asp](http://microsoft.com/business/casestudies/b2c/dollarrentacar.asp)

**How CompUSA used .NET connected software to accelerate business intelligence.** CompUSA had 228 retail stores, a services division, corporate sales, and a training division. Moving forward, they wanted to maximize the value of customer and sales data stored on a reporting system on an AS/400; an SAP system running on SQL Server 2000; Oracle databases; and several custom solutions. Using .NET connected software, CompUSA was able to extract their POS data and consolidate it in a central data warehouse where it can be analyzed in near-real time. So, store managers can see what adjustments are needed to meet opportunities as they arise. To see a video report on this story, go to [microsoft.com/SERVERS/evaluation/casestudies/compusa.asp](http://microsoft.com/SERVERS/evaluation/casestudies/compusa.asp)





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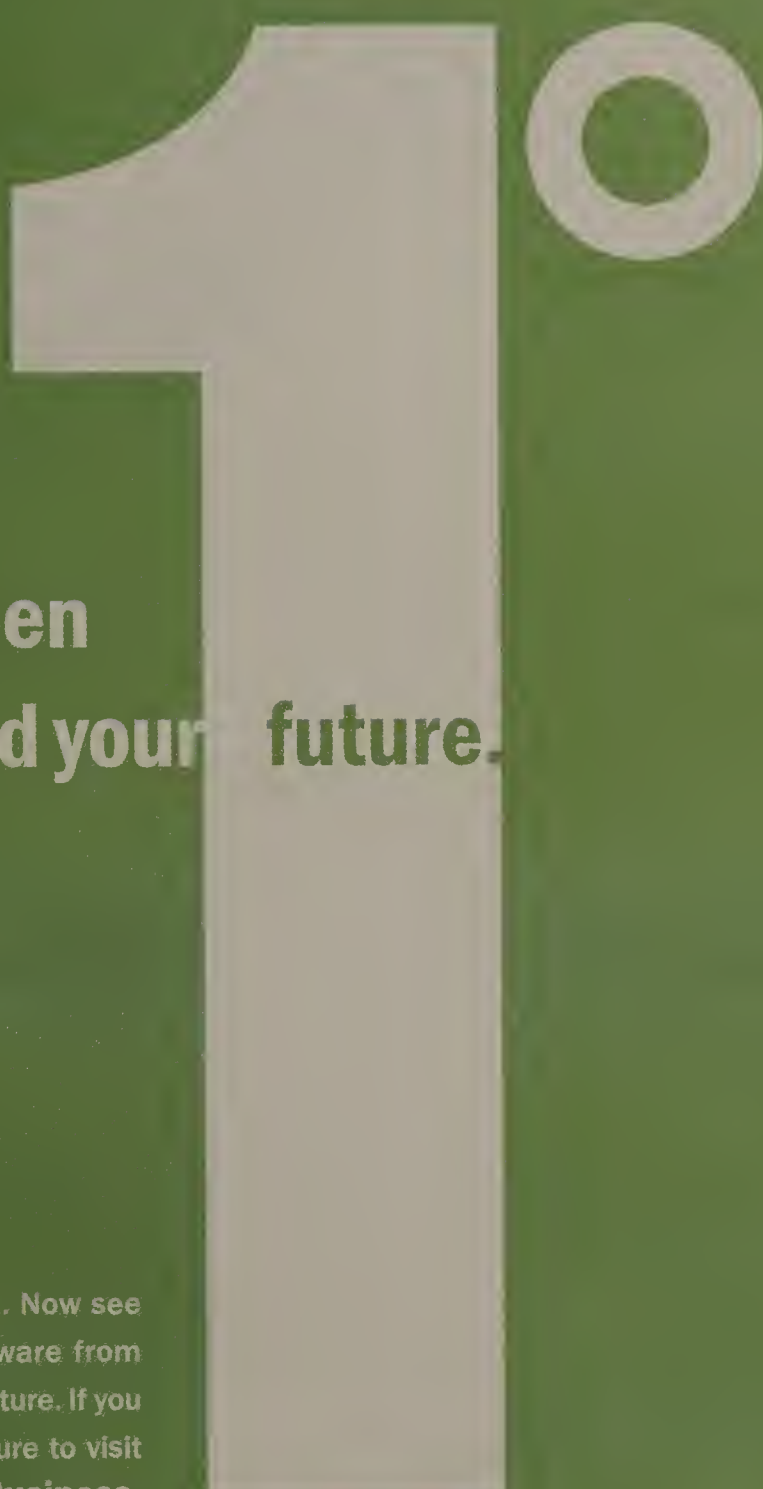
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## Short Takes

■ **Dell** recently acquired **Plural** to boost its services businesses. Dell has said in the past that it would make a number of small acquisitions to fill holes in its enterprise business offerings. Plural specializes in Windows NT- and 2000-based e-commerce services and consulting, and is expected to help Dell develop a larger professional services area.

Meanwhile, Dell is expected to announce this week the latest product in its partnership with **EMC** to resell EMC storage arrays. The company will announce **Power-Vault 750N/755N** on Dell/EMC, an architecture that connects Dell's network-attached storage servers with individual EMC Fibre Channel arrays, direct-attached parallel SCSI storage or Fibre Channel storage-area networks. The combination is aimed at businesses that want to use Fibre Channel equipment and eventually migrate to a SAN or businesses with users who want their SANs to be accessed from the network. Pricing varies according to hardware configuration. [www.dell.com](http://www.dell.com)

■ **NetMotion Wireless** this week will release an update to its **Mobility** wireless connectivity and security software, adding the ability to automatically switch users to the most reliable wireless network available to them, boost the encryption used in the software and add support for Nortel's Contivity VPN devices. Mobility 3.51 is a client-server product designed for Windows PCs and Pocket PC handhelds that lets users maintain connections to their applications while roaming across networks and subnets, and ensures continuity of their wireless service across a range of IP networks.

NetMotion Mobility server runs on Windows NT and 2000, and the client runs on all Windows versions, including CE, Pocket PC and Pocket PC 2002. The software will cost \$6,000 for 10 users. [www.netmotion.com](http://www.netmotion.com)

## Engineering a VoIP swap

Energy company makes a move from 3Com to Alcatel IP telephony gear.

■ BY PHIL HOCHMUTH

WINDSOR, COLO. — Call it a neck-saving move.

Manufacturing firm Encorp recently swapped its aging, overworked 3Com IP PBX for Alcatel's OmniPCX4400 IP PBX. With the 100-user NBX phone system pushed to its limits, Encorp IT director Stan Seago says, "We were overloading the system. Once we started getting to a saturation point, voice calls started digitizing and you'd lose parts of words."

As a result, "a couple of vice presidents were no longer getting through to our venture capitalists and key customers — so my neck was on the line," he says.

The company, which makes equipment for managing electrical energy, recently made a switch from one LAN telephony system to another, opting to upgrade with Alcatel's OmniPCX4400 IP PBX when it out-

grew the 3Com NBX 100 system it installed more than two years ago.

Seago says the reason for the voice-over-IP swap "was a bit of future planning," as the company saw its employees jump from 18 to 145 in two years. "We expect to continue growing," he says.

### The competition

Seago looked at Alcatel's low-end OmniPCX 4400, which can scale to about 500 users. 3Com has since released its SuperStack 3 NBX, which scales to 700 users — and this week, an updated version that goes to 1,500 phones. But at the time, Seago choose Alcatel's product because the 500-user NBX was new, and Alcatel already had support for larger users.

"When putting a phone in for the president of the company, you don't want to put something in that was first-generation," Seago says of the newer version of the

3Com product. However, if the decision was to be made today with the 3Com SuperStack NBX being out for some time, "I might have chosen differently," he adds.

Other factors led to the decision to go with Alcatel, Seago says.

"With Alcatel, the pieces we wanted, like scalability, an integrated call center and multiple site support with directory services were all there," he says.

Seago says he will use the OmniPCX to control call routing and queuing for the company call center, and for computer-telephony integration for call center staff. And because the box supports Lightweight Directory Access Protocol, he will integrate the phone system directory in with his Microsoft Active Directory to consolidate management for voice and data.

Although the OmniPCX offers more scalability and features, Seago says he misses

See Encorp, page 16

## RouteScience box chooses best path

Company introduces PathControl 3300 to boost VPN performance.

■ BY TIM GREENE

RouteScience Technologies this week is introducing a network appliance designed to make site-to-site IP VPN connections faster and more reliable so they can be used as a less-expensive alternative to frame relay or dedicated lines.

The company is introducing PathControl 3300, a box that picks the best route for corporate Internet traffic to take as it leaves sites that have multiple Internet connections.

The idea behind this route-control technology is that with more than one Internet connection to choose from and the ability to choose the best-performing one, a corporate site almost always will have an available Internet link that performs well enough to carry critical network traffic. Today, such traffic is typically carried on frame relay or dedicated circuits.

So far, a small group of vendors is promoting route-control technology as services or as boxes companies can buy. In addition to RouteScience, these vendors include netVmg, Opnix, Proficient Networks and Sockeye Networks.



RouteScience's PathControl 3300 can choose optimal Internet connections.

Route controllers sit behind corporate firewalls and act as routing peers with WAN routers that connect to more than one ISP. Route controllers probe to determine how well each ISP connection is performing and pick the best route for traffic to take. Using Border Gateway Protocol, these devices update the route tables of the WAN routers so they route traffic to the best-performing ISP.

Later, if another ISP's performance becomes the best, the route controller changes the route tables again to optimize traffic flow.

PathControl 3300 is a scaled-down version of the company's initial product, called PathControl, which is designed for major corporate sites that host Internet Web sites and e-commerce sites. Users of these sites can access servers literally from anywhere in the

world. The 3300 picks only the best Internet connection to link a remote site to a limited number of other corporate VPN sites, so it requires less processing power.

Still, analysts question whether users will pay the price being asked. Route-

Science's central site gear costs up to \$250,000, and PathControl 3300 for branch sites costs \$15,000 to \$30,000 depending on the hardware configuration.

"If you pay that much to improve a VPN connection between a headquarters and a branch office, the price [of multiple ISP connections] has to come down \$3,000 per month to make any meaningful return on your investment," says Zeus Kerravala, an analyst with The Yankee Group.

Kerravala also says the price of the branch-office gear has to come down to \$7,000 to be attractive to enterprise customers. He notes that netVmg recently introduced a similar branch-office box for \$12,000.

He says businesses might want to test Sockeye or Proficient, which offer route-control services. That way they can get a flavor for the technology.

RouteScience: [www.routescience.com](http://www.routescience.com)



TOLLY ON  
TECHNOLOGYKevin  
Tolly

## IPX-celligence overlooked?

would have to imagine that 99.99% of hacking activity centers on IP. IPX hacking just doesn't offer the same return on investment to the hacker.

Another respondent cited lower total cost-of-ownership when using IPX. He had tremendous trouble configuring multiple network printer servers with friendly names first via a gateway Dynamic Host Configuration Protocol server and then via static addresses. However, his troubles vanished when IPX was configured as the network protocol on the server supporting the printer management console.

One technician put it simply: "You have to admire a protocol that uses a [network interface card/media access control] address in its addressing scheme ... Elegant!" However, his company's network has recently stopped routing IPX.

Another IPX advocate admitted that his company has weaned the protocol from its WANs, but uses it on LANs for a number of reasons, including to maintain support for legacy applications, such as payroll, that

were customized to run over IPX networks that support NetWare-related Btrieve.

Interestingly, this last user also hits on another issue of IPX excellence: uptime. Seems he's the lone NetWare expert left at his company, which has added 20 people to support the burgeoning population of Windows servers.

NetWare server uptime is high and "abends" (short for "abnormal ending" and also known as "Blue Screens of Death" in Microsoftese) are so rare that an occurrence is headline news at the company and he takes the heat. Meanwhile, he says Windows server outages are so common, they are a given and people rarely complain.

I applaud all our IPX advocates for speaking up. It appears there still are pockets of IPX out there on enterprise networks. And while a few users expressed the need to tap into device statistics on the performance of IPX, there was no resounding chorus for such support or for vendors to prove their IPX routing performance. Vendors offering

IPX routing in their switches don't seem to be removing it — but we don't see any new switches on the market touting such support. Fortunately, one can always run IPX on a Layer 2 network. Layer 2 "bridges" (as switches really are) are protocol independent — even folks with SNA and DECnet will be forever supported.

But that's another story ...

So in a nutshell, it seems that with all the finesse of IPX, it is used primarily to support legacy applications and for protection against hacker attacks.

And while IPX as a routing protocol will remain an inherent part of a switch's capabilities for many vendors, judging by the number of respondents, and not their fervor, it seems that the user community has little interest in IPX numbers, let alone any IPX-pectations.

*Tolly is president of The Tolly Group, a strategic consulting and independent testing company in Manasquan, N.J. He can be reached at ktolly@tolly.com.*

# Low-cost switches from Allied Telesyn

■ BY PHIL HOCHMUTH

BOTHELL, WASH.—With an eye toward helping customers more quickly and simply deploy and manage workgroup switches, Allied Telesyn last week added three devices to its line of "virtually" stackable Layer 2 Ethernet switches.

The AT 8000 series consists of three 24-port boxes that can be stacked together and controlled with the company's Enhanced Stacking software.

Enhanced Stacking software also removes the restriction that switches actually be physically stacked as they can now be directly connected to the network, not via specialized interconnections between boxes. This support could let switches in an Enhanced Stack be distributed in different wiring closets or even on different floors in a building.

The AT-8025FC comes with 24 10/100M bit/sec Ethernet ports and two fixed-configured 100-BaseFX ports for connecting to a fiber-optic backbone.

The AT-8024GB comes with two Gigabit Interface Converter expansion slots for inserting Fast or Gigabit Ethernet uplinks with fiber or copper GBICs. The AT-8024 comes with no uplink modules.

Introduced in April, Enhanced

Stacking software lets up to 24 Allied Telesyn switches be stacked together with standard Ethernet connections, allowing for up to 576 ports to be managed with one IP address.

The software also lets users access configuration settings through a Web interface on the switches. This feature could let changes such as virtual LAN (VLAN) settings, port mirroring and monitoring, port trunking and quality-of-service (QoS) settings be made more easily than accessing multiple switches through a command-line interface management tool such as Telnet, according to the company.

All three switches support IEEE Ethernet standards such as 802.1Q VLAN tagging, 802.1ad link aggregation and 802.1p traffic prioritization for QoS.

The AT-8026 costs \$845, while the A5-8024GB and AT-8024 cost \$1,000 and \$700, respectively. All products are available now.

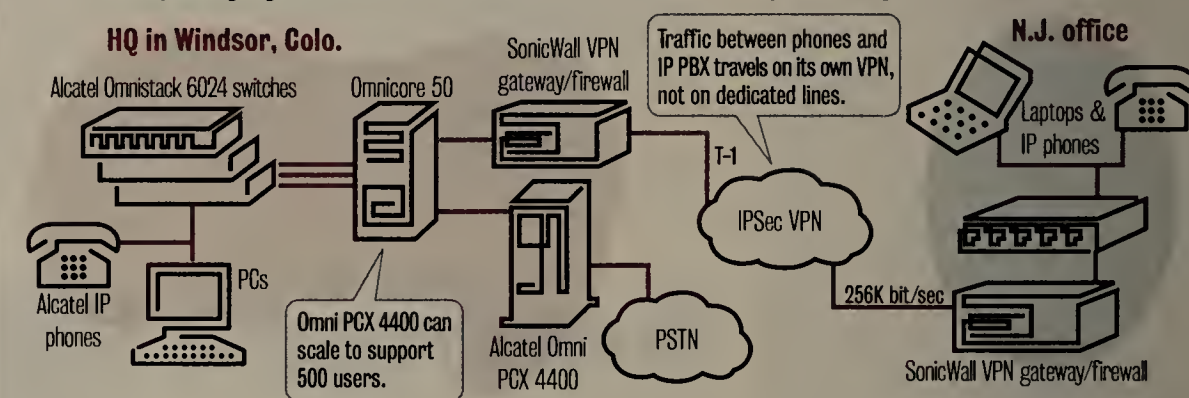
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## Encorp's VoIP upgrade

Energy company Encorp installed Alcatel's OmniPCX 4400 IP PBX when it outgrew its 3Com NBX IP telephony system. Here's the network and a couple of key benefits:



### Encorp

continued from page 15

the simplicity of the 3Com management interface.

"The 3Com box was easier to program," he says. "The Alcatel [IP PBX] is a fairly complicated box. It has interfaces that let you do anything you want to do, including things you don't want to do."

Like any new system, there is a learning curve, Seago says. Recently while configuring two phones to cover the same extension, he and his staff inadvertently disabled both phones, he says.

### Sticker shock

The difference in cost of the two companies' IP phones also was a bit of a shock, Seago adds.

"What surprised me on the purchase was the high price for the phones themselves," Seago says. "Our 3Com phones were costing us about \$220 each, but Alcatel's Reflex [IP handsets] are costing us about \$600 to \$700, including

all the software licensing."

Once the Alcatel system was delivered and brought up, changes to the network in swapping 3Com IP telephony for Alcatel were almost nil, Seago says, as his data network already consisted of Alcatel Omnicore and Omnistack switches. Support for 802.1Q virtual LAN (VLAN) tagging on the OmniPCX and Alcatel Ethernet switches also has given the voice network a quality boost.

"With 3Com, voice was in direct contention with our data network," because the 2.5-year-old NBX model didn't support 802.1Q VLANs, Seago says. "If a big e-mail of FTP was going through the network, everyone in the company knew it."

Now Seago segregates traffic going between the IP phones and the IP PBX into their own VLAN without any traffic prioritization.

"We didn't have to implement priority queues on the switches and use prioritization because

the isolation [of the voice packets onto a VLAN] has been able to take care of the entire load," he says.

Seago also has extended the OmniPCX to a branch office in New Jersey, which is connected by a VPN link. A T-1 line from Qwest connects Encorp's Windsor headquarters to the Internet, and a 256K bit/sec leased line links the New Jersey office at the other end. The company uses SonicWall VPN gateway/firewall boxes at each end of the network for IP Security traffic encryption. While no quality of service is used over the VoIP/VPN link, Seago says it's enough to support the small branch office.

"We found that you can do three full conversations and have no corruption," over the VPN line, even with data packets running alongside voice, Seago says. "If you do a large file transfer, yes, you'll see a little [breakup] of voice, but in real-world mode, we haven't seen it." ■



# Net.Worker

■ PRODUCTS, SERVICES AND STRATEGIES  
FOR TYING TELEWORKERS TO THE ENTERPRISE

## Connections 2002 notebook

Where home network technologies are and where they're headed.

■ BY TONI KISTNER

I came away from the recent Connections 2002 conference in Dallas with a tote bag full of developments and insights from each of the home network technology camps. Here's a rundown:

### Power line

Cogency Semiconductor demonstrated a reference design of Piranha, its next-generation HomePlug certified chipset. The first HomePlug products based on the Intellon PowerPacket chipset are bulky desktop adapters. In contrast, the Cogency chipset allows for a much smaller adapter that plugs into a power outlet, saving considerable desk space. It also works on power strips.

With two chip makers in the market (three if you count Conexant, which also makes the Intellon chip), the price of products should drop. (Today, Linksys Intellon-based power-line adapters and bridges cost about \$150.) Cogency CEO Ron Glibbery says his company built the reference design to help vendors speed time to market, and expects we'll see the first products based on its USB-HomePlug Wall Adapter by Thanksgiving.

By next month, the Consumer Electronics Association will likely select a power-line technology for its rival power-line specification, called R 7.3, says a representative from Itran, one of the contending companies. The race is between Itran, nSine and Inari. Even so, HomePlug President Tom Reed isn't concerned.

"The game is over," Reed says. "Vendors are already building HomePlug products. They won't build a second product based on a second technology."

Reed adds that the HomePlug Powerline Alliance is learning from the mistakes of the Home Phoneline Networking Alliance (HomePNA) when it comes to consumer education. While HomePNA is a stable, easy-to-use technology, sales stalled because consumers never understood the concept of running a network over existing phone lines.

"We're working hard to simplify the message," Reed says. "We're even kicking ourselves for calling it 'power-line technology.' Turns out, that makes people think of the wires that run outside along telephone poles. Instead, we're pushing the idea of 'electrical outlet connectivity.' We will have a mass market focus — Always!

### HomePNA

While the HomePlug Powerline Alliance has kept a low profile in recent months, news of Version 3.0 of the specification should give it plenty to talk about. Version 3.0 will allow for much higher speeds — from 40M to 100M bit/sec, making it an excellent technology to distribute video throughout to homes. HomePNA is considering technologies from three chip manufacturers — CopperGate, Serconet and Broadcom — as the basis of the new specification. Broadcom's technology was used for previous versions, but an insider said the group needs "some new blood and not just Broadcom as the shoe-in." HomePNA will choose the winner by the end of this month, according to Dave Thomasson, HomePNA spokesman and CopperGate vice president of marketing.

Thomasson says he is confident Version 3.0 will put HomePNA back in the race for next-generation applications. "What better way to transmit a movie that's playing on the TV in the living room to a TV that's upstairs in the bedroom? Sure, wireless has a place, but not so much to move video. If you can't define the range of the network,

### Home network scorecard

Current and emerging technologies at a glance

Technology	Transmits data over	Pros	Cons
HomePlug	Existing power lines at 14M bit/sec	Good range; easy to configure; next-generation products will be smaller; plug into power outlet; prices will drop soon.	First iteration of products are expensive, bulky, lots of wires, require wall outlet.
R 7.3	Existing power lines at 1M bit/sec	Focused on connecting home appliances at lower speeds.	Incompatible with HomePlug gear.
HomePNA	Existing phone lines, Version 2.0 10M bit/sec	Easy to use; reliable; good range; built-in quality of service; next generation shows promise.	Current speeds slow for video distribution.
HomeRF	Wirelessly in the 2.4-GHz band, 10M bit/sec	Built for the home environment, low interference; good signal strength through walls.	Dearth of industry support for products; relatively slow speeds.
802.11b	Wirelessly in the 2.4-GHz band, 11M bit/sec	Overwhelming industry support; good performance and prices.	Interference with some 2.4-GHz phones; signal strength varies.
802.11a	Wirelessly in the 5-GHz band, 54M bit/sec	High speeds; eight channels compared with 802.11b's three.	Costly, less reliable and half the range of 802.11b.
802.11g	Wirelessly in the 2.4-GHz band, 54M bit/sec	High speeds; backward compatible with 802.11b products. Good range.	Specification won't be completed until mid-2003.

For the full version of this story, please go online. DocFinder: 9722

how can you prioritize packets?" he says.

HomePNA 3.0 adapters and bridges are scheduled to hit the market by March of 2003, with residential gateways to follow in June 2003.

### HomeRF

On to the wireless world: In the face of the wild success of 802.11b, the HomeRF Working Group has recently changed its tune to one of cooperation, not competition — at least on the data side. To achieve higher than HomeRF 2.0 technology's 10M bit/sec data rates, the group plans to write application briefs describing how to bridge between 2.4-GHz and 5-GHz technologies, and how to handle differences in quality of service.

Wayne Caswell, the group's communications chairman, also sees a bright future for HomeRF technology in multimode chips. There are more than 10 chip vendors making multimode chipsets — which support more than one technology. "Embedded Wireless Devices makes a chip that lets you use Bluetooth and 802.11b together," Caswell says. "Why not one that supports 802.11b and HomeRF?"

### 802.11x

John Marshall, 2Wire's vice president of

marketing, is trying to figure out what flavors of 802.11x to support in the company's residential gateway this year — and next year. 802.11b is a no-brainer in the home — the number of wireless home networks is expected to jump from 10% to 40% this year, according to Cahners In-Stat analyst Mike Wolf. But when it comes to higher speeds the jury is still out on whether 802.11a or 802.11g will win. 802.11a is available now, works in the 5GHz band and gets 54M bit/sec (rated). 802.11g, which won't be out for a year, works in the 2.4-GHz band, gets comparably high speeds and is backward compatible with 802.11b.

While 802.11a is being adopted, albeit slowly, in businesses today, Marshall says, "802.11a is no good in the home. It requires more power, and when you try pushing more power through plaster walls, the signal degrades and throughput drops right off. For 2Wire, the decision is driven by cost. "We're leaning toward 802.11g. But if 802.11a gets good traction in the business environment, we've got to reconcile how to support users who brings their 802.11a notebooks from the office to work at home," Marshall says. "To us the big question is whether the market will accommodate a higher-priced dual-mode [802.11a/g] product." ■

### Short Takes

■ **Kinetic Workplace** last week announced two Web-based telework training products geared to large firms. KineticSkills Online Training for Teleworkers teaches employees how to enhance their communication and remote-work skills, choose telework days, set core hours, create a support network, participate in virtual meetings, and watch for and maintain career advancement. KineticSkills Online Training for Managers helps bosses recognize the management skills and practices they need, and offers tips and tactics to ensure their employees' success. Available now, pricing has not been announced. [www.kineticworkplace.com](http://www.kineticworkplace.com)



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# Enterprise Applications

■ INTRANETS ■ MESSAGING/GROUPWARE  
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■ NETWORK MANAGEMENT ■ DIRECTORIES

## Short Takes

■ **IBM** and **Inktomi** last week teamed to help large corporations provide high-bandwidth applications, including streaming media and key business applications such as enterprise resource planning, across their networks.

The companies will help their customers build enterprise content delivery networks. Inktomi software running on IBM xSeries servers forms the core of the offering, and IBM will provide systems integration services, and in some cases, storage gear.

Companies that want to provide content such as training videos might have to cache that content in different locations around a network and change it over time. IBM and Inktomi aim to help them manage their delivery of content and applications, making sure versions are synchronized, available bandwidth is used intelligently and the end user gets the right quality of service. [www.ibm.com](http://www.ibm.com); [www.inktomi.com](http://www.inktomi.com)

■ The network executive's task of keeping users in compliance with company computing policies might have gotten a bit easier last week as **PoliVec** released Version 3.0 of its Scanner automated policy auditing tool. The tool boosts the application's auditing capabilities, but also lets administrators scan PCs to ensure they are running up-to-date security patches PoliVec says.

**PoliVec Scanner 3.0** can scan between 10 and 20 networked machines running Windows NT 4, 2000 or XP. It can inspect user passwords and check them against a list of common, easily guessed words. If such words are found, users can be directed to choose harder-to-guess passwords.

Expanding beyond policy control, Scanner 3.0 also will scan programs for patches and check Microsoft applications against a PoliVec-supplied database to ensure users are running up-to-date software. The product costs \$10,000 for 250 systems. [www.polivec.com](http://www.polivec.com)

## Cultivating managed security

Outsourced security can ease admin. headaches, but issues remain.

■ BY ELLEN MESSMER

Although outsourcing security is still a controversial subject, an increasing number of businesses are electing to turn over the round-the-clock monitoring of their intrusion-detection systems, firewalls and VPNs to outside firms known as managed security service providers that do the job remotely over the Internet or private lines.

Corporations often say the reason to outsource is the difficulty in finding trained personnel to hire for late-night shifts of IDS and other security gear, or that in-house costs appear far more than what MSSPs charge to perform the job.

Security managers who have outsourced security monitoring emphasize the need to establish close contact with the MSSP staff to respond quickly when security incidents, such as attempted break-ins, arise.

Boston's CareGroup Healthcare System, which operates a regional network in eastern Massachusetts for sharing of medical data, uses MSSP Counterpane Internet Security to monitor its perimeter and internal servers.

CareGroup CIO John Halamka said he faced the decision whether to outsource intrusion-detection monitoring more than

### Managed security

#### Pros and cons of managed security services:

##### Pros

- Security protections customers otherwise might not be able to afford.
- Ability to tap outside security expertise.
- Wide choice of security services available.

##### Cons

- Less possibility to build in-house expertise and knowledge.
- Legal complications might arise during security incidents.
- Economic conditions could force security services provider out of business suddenly.

a year ago when he purchased IDS equipment, which in this case was the RealSecure host- and network-based IDS from Internet Security Systems.

"I had a choice 18 months ago whether to require in-house staff to do it — and I estimated I would need five full-time engineers — or outsource it," Halamka says. "I

decided to outsource it, and it costs less than half of what it would cost me to do it."

CareGroup faces continuous network attacks, some of which have been traced to the Massachusetts Institute of Technology, Halamka says. Responding to the problems from port scanning to break-ins and denial-of-service attacks requires close communication between Counterpane and CareGroup staff. "We really had to work together to get the right level of granularity on this," he says.

The CareGroup network operations center, which is open 24-7, works with Counterpane in a way that gives CareGroup immediate notification of real trouble, but saves the routine problems for daily e-mail reports. Although it's taken considerable effort, outsourcing security monitoring has worked well so far for CareGroup, which just renewed its contract with Counterpane for another 18 months.

At Chicago's Peoples Energy, vice president of IT services Will Evans says his company found it was far from easy to hire staff to conduct security monitoring. "You have to align yourself with someone for outsourced monitoring," says Evans, who began using Riptech last fall for perimeter

See MSSP, page 22

## Miramar beefs up PC migration mgmt.

■ BY JOHN FONTANA

SANTA BARBARA, CALIF. — Upgrading end users to new PCs along with their coveted data and application settings is an exercise fraught with peril and one no IT staff takes lightly.

Miramar Systems this week addresses the challenge with an upgrade to its Desktop DNA Enterprise Edition and a new companion product called Desktop DNA Professional for companies with fewer than 500 PCs.

The software, called DNA because it records a PC's unique qualities from wallpaper to network settings, automates and ensures the accuracy of data and configuration settings for Windows-based systems migrated between PCs. It is a reaction to keep pace with competitor Altiris, according to experts. Tranxition also develops similar migration tools.

Miramar has added a management tool kit in its DNA Enterprise Edition 4.0 that provides utilities for controlling the migration process, supporting proprietary applications and analysis.

"Getting it right can mean completing migrations in a couple of hours as opposed to an entire day," says Steve Furgas, manager of the product support team for Deloitte Consulting. "The management gives you the ability to set up the migration software so it reduces the time a technician has to work with a

machine. A technician can start one migration and move on to another machine."

DNA Enterprise Edition features the Migration Management Toolkit suite, which is made up of DNA Director, Template Editor, DNA Explorer and DNA Studio. Director provides control over the entire migration process. The Template Editor is used to create custom templates that control what files and settings are collected, including those from proprietary applications. DNA Studio is used to write custom scripts for collecting data, including a drag-and-drop feature that automatically generates scripts. DNA Explorer provides a centralized view of files that store the collected data, so-called DNA files.

"We are recommending migration over ghost imaging because you end up with a more stable desktop," says Rob Enderle, an analyst with Giga Information Group.

Desktop DNA installs on individual PCs, but DNA files can be stored on a server before being applied to a new PC. The software also works directly with a machine-to-machine connection and includes an undo feature that can be used on individual settings.

Pricing for Desktop DNA Enterprise Edition 4.0 starts at \$32 per seat. The Professional Edition, which has fewer customizable features, is priced at \$27 per seat.

Miramar: [www.miramar.com](http://www.miramar.com)



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Fellow Network World columnist Mark Gibbs likes pretty e-mail. Or so his May 27 Gearhead column would have us believe ([www.nwfusion.com](http://www.nwfusion.com), DocFinder: 9733). But I hope that he won't send me pretty e-mail when he sees this column because he will get the letter back unread.

I don't know who came up with the idea of using HTML — the protocol used to describe the appearance of Web pages — in e-mail, but it seems to have been done without much consideration of privacy

## Pretty is as pretty does

and security implications.

HTML e-mail can sure be pretty, or is that pretty annoying? The program that Mark gives such a high grade to sounds like it could do a nice job of putting together an e-mail message, complete with colors and sound effects, that I would not want to get first thing in the morning. But the reason Mark, or anyone else who sends me an HTML message, will get it automatically tossed back has nothing to do with the fact that the mail might contain a tinny version of the "Ride of the Walkure." I bounce HTML-based e-mail because it is a threat to the security of my computer and to my privacy.

This column is far too short to list all the ways HTML can be a security or privacy threat — Google gets 77,000 hits for "privacy + 'HTML e-mail'" and 20,000 for "security + 'html e-mail'" — but here are a few:

CERT has posted a dozen or so warnings of ways that HTML e-mail can be used to exploit vulnerabilities in buggy software. Some of the exploits are quite impressive — see the CERT Web site ([www.cert.org](http://www.cert.org)) for more information.

But the big threats do not depend on flaws in software to work — they operate even if the software is totally bug-free because they use features in HTML. Kiss your privacy — what shreds you still might have left on the Internet — goodbye if you or your company accepts HTML e-mail.

The sender of the message can find out when and on what computer you read the e-mail. That person also can find out if you forwarded the e-mail to someone else, and who the someone else is and return a copy of the cover letter you sent with the e-mail to that someone. The same is true if that

someone replies to you or forwards the e-mail to a third person and remains the case as long as the original e-mail is included. The original HTML e-mail sender also can stick a cookie including your e-mail address on your machine that can later be read by cooperative Web sites, even if you are trying to be anonymous.

There are many more threats and I could go on, but you get the not so pretty picture. Sorry Mark, I give the idea of HTML e-mail a minus 9 on your Gearhead scale.

Disclaimer: This time of year, as part of its fund-raising effort, Harvard is very pretty. But the university has expressed no opinion on pretty e-mail.

*Bradner is a consultant with Harvard University's University Information Systems. He can be reached at [sob@sobco.com](mailto:sob@sobco.com).*

### MSSP

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monitoring.

Many say deciding whether to outsource security monitoring and which MSSP to choose is a challenge.

"Pitfalls abound in outsourced security services, not just in the U.S., but in Europe and Middle Eastern countries, too," says Stan Kiyota, chief IS security officer at Booz-Allen & Hamilton, whose global network spans 75 countries to serve 11,000 employees.

Kiyota said the big consultancies, such as Deloitte and Touche, are security "generalists" that may sign a contract for managed security but then have to go out and hire the expertise.

Kiyota says larger companies might be more financially stable, so there's less worry that they might go out of business suddenly, as Pilot Network Services did last year.

Smaller MSSPs, such as Counterpane, tend to be more candid about their strengths and shortcomings, Kiyota says. But the question for smaller MSSPs is whether they can meet the needs of a large global corporation.

Booz-Allen outsources its LAN password management and router management to Techtronics, and for a few years had a contract with a European-based MSSP, which Kiyota declined to name, to manage several Check Point Software VPN gateways for 100 offices around the world.

But Booz-Allen recently took back management of its VPN-based firewalls, in part because costs, at \$50,000 per firewall-based VPN, seemed too high and in part because the company prefers to maintain that expertise in-house.

Kiyota says outsourcing security does not mean abdicating responsibility for security administration. And it requires the customer's IT and legal departments to draw up a contract with the MSSP to designate terms and liabilities.

### Going up

**Annual U.S. spending on managed security services is expected to grow from \$1.6 billion this year to \$2.2 billion by 2005, according to IDC.**

This effort might well be at odds with the MSSPs whose "fine print in the contracts generally says they have no liabilities" for problems, including security breaches, that might be their fault, Kiyota says.

Kiyota advised starting small by letting a chosen MSSP provide just one or two management functions and see how that goes before committing more.

Choosing the right MSSP isn't easy. Services and pricing range from about \$1,700 per month for simple firewall management to upwards of a million dollars to manage a full-service antivirus, VPN, IDS and firewall monitoring on the inside and out.

Symantec, which operates a number of security operations centers around the world, says many of its customers, including the European arm of Xerox, have opted for a full-service plan that also involves having Symantec personnel at the corporate site.

Some MSSPs claim to be willing to monitor almost all vendors' security equipment, while others are limited to specific brands. Some will remotely "patrol" inside the network, others restrict their services to perimeter firewall, IDS or antivirus protection.

According to IDC, the total MSSP market in the U.S. reached \$859 million last year, with no clear market leader, although Electronic Data Systems, IBM, Counterpane, ISS and Symantec are among the better known. Some, such as Activis and Ubizen, are better known in Europe. Ubizen has established a foothold in the U.S. by opening a security operations center in Reston, Va.

"The market is still highly

fragmented, with consolidation under way," says IDC analyst Allan Carey. That means smaller MSSPs likely will be bought out if they don't go under.

VeriSign bought Telenisus and its security operations center to get a foothold into the MSSP business.

There are dozens of firms hanging out the MSSP shingle: UUNET, Foundstone, Computer Associates, Genuity, Qualys, SAIC, Veritect, Guardent, TruSecure (which bought Three Pillars), SecureWorks and NetSolve are just a few. Each MSSP has its own list of what it will do for the customer.

Chicago's First American Bank and Charter Bank, of Wyandotte, Mich., use the

NetSolve managed security service for firewalls and IDS.

"They require you to use a certain type of equipment," says Noel Lavasseur, executive vice president at First American. Both banks use the Cisco PIX firewall and IDS in lieu of other vendor products they had.

"NetSolve has access remotely and they always have control of the firewall and the monitoring," says Mark Parquette, assistant vice president of IS at Charter. "They do this for a monthly fee of about \$1,000 for 24-7 monitoring. We get reports as often as we want. As a small bank, we don't have the staff to do this. It's a combination of price and confidence." ■

## Citrix boosts portal product

■ BY JENNIFER MEARS

FORT LAUDERDALE, FLA. — Citrix Systems last week unveiled its NFuse Elite access portal server, which company executives say gives businesses an economical, easy-to-deploy alternative to more complex enterprise information portals.

NFuse Elite provides secure, Web-based access to applications and information employees need based on their roles within a company, says Jim McGrath, manager of product marketing for Web products for Citrix. Previously, Citrix's portal offering consisted of a static interface to centrally hosted applications, letting users access applications from any browser, rather than from a client application.

That browser interface, now called NFuse Classic, is still available. NFuse Elite takes Citrix's portal efforts to the next level by providing customizable access to more than just applications.

"It can serve up not only a PeopleSoft application, for example, but also content and information," McGrath says.

In that vein, Citrix also announced an agreement with Screaming Media, which provides news, stock quotes and weather information, to include syndicated content

within the NFuse Elite portal.

NFuse Elite also provides wizards and drag-and-drop menus for easy customization and portal creation.

Citrix is partnering with other software vendors, such as Documentum and eRoom Technology, to provide content management and collaboration capabilities within the NFuse portal. David Manks, senior director of product marketing at Citrix, says more partnerships will follow.

Citrix has played around the sidelines of the portal market since it acquired portal maker Sequoia Software last year. With NFuse Elite, it takes advantage of Sequoia's XML-based portal technology to build a product that can be customized as business needs change.

NFuse Elite runs on its own servers and can be deployed in conjunction with MetaFrame, Citrix's flagship software that lets a variety of devices connect to and run applications deployed on Windows or Unix servers. NFuse Elite also can run independent of MetaFrame, Manks says. Base requirements include Windows 2000 and Internet Authentication Service.

NFuse Elite is available now and costs \$67 per user, with a minimum 75 users.

Citrix: [www.citrix.com](http://www.citrix.com)



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# Service Providers

■ THE INTERNET ■ EXTRANETS ■ INTEREXCHANGE AND LOCAL CARRIERS  
■ WIRELESS ■ REGULATORY AFFAIRS

## Qwest readies long-distance submissions

■ BY MICHAEL MARTIN

Qwest officials say the regional Bell operating company is on the verge of winning regulatory approval to offer long-distance services in several of its home states, letting it better serve large businesses whose long-distance needs span the U.S.

However, Qwest may not be as close to long-distance approval as company officials are making it appear.

"It's going to be a long way down the road before businesses will be able to go to Qwest for a national service," says David Rohde, a senior analyst with TechCaliber.

Qwest has yet to win the backing of any state public utility commission (PUC) for its long-distance submissions to the Federal Communications Commission. Winning over the PUCs is a necessary first step to any successful FCC application.

To make matters worse, at least five states

are investigating allegations that Qwest gave some competitive carriers preferential access to Qwest's network in return for the competitors' backing of Qwest's long-distance bids. And to top it off, Qwest has missed at least three previous self-imposed FCC submission deadlines.

Qwest is the only RBOC yet to win any long-distance approval from the FCC.

Qwest recently said it would submit applications for five states — Colorado, Nebraska, North Dakota, Iowa and Idaho — by this week. Eight of the remaining nine states will be submitted this month or next month, with Minnesota slated for a submission in the third quarter, Qwest spokesman Skip Thurman says.

Under the Telecommunications Act of 1996, an incumbent local carrier such as Qwest cannot offer long-distance services in its local service territory until it

proves it has opened up its network to competitors. Then it can submit an application for long-distance approval to the FCC.

There are a few steps an RBOC must take before submitting an application to the FCC. The first is to pass a 14-point checklist proving that the RBOC's ordering systems can accommodate competitive carriers. Qwest recently issued a statement saying it had passed the 14-point test in 13 states. Qwest already had issued a statement saying it had passed the test in Arizona.

Next, the RBOC must prove to the state PUCs that allowing Qwest into the long-distance market will serve the public interest.

"We have lots of states where we're doing the final wrap-ups," Thurman says.

Rohde says it's unlikely Qwest will offer long-distance services any time soon.

"They've missed many of these dead-

lines already," he says. "One last summer, one at the end of [last] year and another in April."

Even if Qwest does submit to the FCC, there's no guarantee its applications will be approved. Rohde says more than half of the applications from the other RBOCs so far have been rejected. Those that have been successful came only after the other three RBOCs had learned from previous mistakes and become more familiar with the FCC process, Rohde says. ■



### More online!

See how the other RBOCs are faring in long-distance.

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## Rackspace rolls out beefed-up service

■ BY JENNIFER MEARS

SAN ANTONIO, TEXAS — Rackspace Managed Hosting, which typically focuses on basic services for small and midsize companies, this week is introducing an offering designed for larger businesses seeking comprehensive care at a price below that charged by high-end vendors.

The new service, called Intensive Hosting, builds on Rackspace's existing hosting platform to provide deeper services such as security and patching, backup and recovery, and server administration. In the past, Rackspace offered basic deployment, monitoring and scaling services.

The company has seen a growing number of large customers as businesses turn away from struggling providers, says Graham Weston, Rackspace CEO. Rackspace says it has been profitable for more than a year.

"We realized we should be adding more managed services to our quiver," Weston says.

Weston could not say how much Rackspace is investing in setting up the new service, which includes a new business unit, but says no additional funding was necessary.

As the hosting market struggled, Weston says Rackspace recognized a growing void: a middle ground between basic

### Rack it up

**Rackspace Managed Hosting, which has focused on smaller customers, is rolling out a service to meet the needs of larger businesses. Called Intensive Hosting, it is standardized on Microsoft and Dell, and includes:**

- Security and patching.
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- Server administration.
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- Hardware, application and database monitoring.
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managed hosting and complex, costly services from providers such as Digex, IBM Global Services and Electronic Data Systems.

"Customers told us they do not require all the custom services they were paying for with other providers and simply wanted a lower price," Weston says.

Marc Colando, CEO of software and services company Experiential Group in Atlanta, says Intensive Hosting offers what

his company needs.

"We had always been interested in their basic managed hosting services, but needed a higher level of knowledge about complex Microsoft back-end systems, along with proactive hardware and software maintenance for our outsourced servers," says Colando, who has been beta-testing Intensive Hosting for the past few months. "Intensive Hosting's numbers simply worked."

Rackspace's basic managed hosting supports Linux and Microsoft. Intensive Hosting will support only Microsoft applications running on Dell hardware, a limited focus that will help keep costs down, Weston says. Rackspace says it will be able to have customers deployed in three to five days, rather than in weeks or months, as some other vendors require.

Rackspace will manage and provide preventive maintenance for operating systems, Web servers and database servers, while providing support for application issues, Weston says.

Andy Schroepfer, president and founder of Tier 1 Research, says that by "not trying to be everything for everyone," Rackspace is providing quality managed services at an affordable price.

Intensive Hosting is priced between \$2,500 and \$25,000 per month, depending on configurations. ■

### Short Takes

■ **BellSouth** last week unveiled plans to launch a network-based Multi-protocol Label Switching VPN service in its nine-state territory by year-end. BellSouth says the managed service will let businesses migrate to new technology without having to pay for customer premises equipment or administrators. No pricing information was announced.

■ Managed hosting company **Digex** now offers advanced management for Oracle and Microsoft SQL Server databases. The service not only ensures database availability, but monitors performance issues. Digex is using **Oracle's Enterprise Manager for Oracle** and **NetIQ's App-Manager for SQL Server**. The company says it will work with customers to monitor specific aspects of a database, detect and respond to potential problems and tune a database for better performance. Oracle monitoring for a single database is \$250 per month, with a set-up fee of \$300. For SQL Server, the cost is \$400 per month, with a set-up fee of \$350.



## EYE ON THE CARRIERS

Lisa Pierce



## VoIP transformation will take some time

In certain instances, voice-over-IP services can offer attractive prices and performance, particularly when calling to or from developing nations.

However, the cost and quality of business-class, public switched telephone net-

work (PSTN) calls within and between industrialized countries is so attractive that the VoIP business case for most customers remains very difficult. The vast majority of enterprise calls are between developed countries.

Although pundits continue to proclaim that most global providers will abandon their PSTNs for VoIP networks as early as next year, I disagree. Many factors will impede such a rapid transformation.

Demand for international VoIP services, although growing faster than the PSTN, is modest and weighted heavily toward consumers. Based on current trends, IP will not become the predominant service supporting international voice calls until the end of 2007.

VoIP services targeted to the enterprise market are immature compared with similar PSTN services. They offer few features or service-level agreements.

The financial commitment required to transform global networks to VoIP is very high — it will take trillions of dollars.

Availability of business-class VoIP services is limited to no more than 55 countries today.

Regulatory barriers impede rapid expansion of VoIP services. In many countries, it will take years for the control exercised by government-run monopolies to wane.

Along select inter-regional routes, many of the largest global and regional providers already have begun to migrate voice traffic to quality of service (QoS)-based multiservice cores. There are strong advantages to building an all-IP backbone network on high-volume international routes wherever a carrier doesn't have an infrastructure.

Global carriers such as AT&T and Cable & Wireless rely on local carrier partners to deliver their voice traffic in most countries. Thus, these providers have strong incentives to build IP-only networks. Of the top five global providers, only C&W has announced its intention to abandon its circuit-switched net for IP, beginning in 2003.

But current business-class VoIP services do not mirror the functionality, scalability, performance or geographic reach of the PSTN. Given the economic climate, most providers will not have the resources to pursue anything other than an incremental VoIP build-out strategy for at least the next two years. Thus, like providers themselves, customers will use a combination of PSTN and VoIP services for many years.

It's important to keep in mind that the biggest proponents of converged WAN services are the leading telecom equipment vendors and global network operators, not customers. By migrating traffic onto a unified transport platform, suppliers stand to achieve big cost savings before their enterprise customers. The majority of benefits to enterprise customers will follow — once the technologies mature in terms of availability, price, performance and features.

Companies that want to implement converged WANs must balance risks that include inconsistent service delivery against promised cost savings. Do the business case . . . and then consider the other factors I mentioned.

Pierce is a research fellow at Giga Information Group. She can be reached at [lpierce@gigaweb.com](mailto:lpierce@gigaweb.com).

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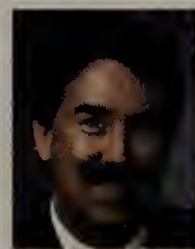
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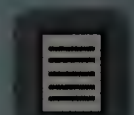


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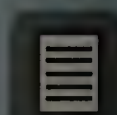
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# The Edge

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## Appian makes waves with metro Ethernet

After big NTT deal, start-up hopes success continues with platform that carries Ethernet over SONET.

■ BY STEPHEN LAWSON

ACTON, MASS. — Metropolitan optical start-up Appian Communications' business model started with a reality check.

Seeing Ethernet's high speed, ease of use and wide availability, founders Mick Scully and Harsh Kapoor in early 1999 envisioned metropolitan carrier networks that would use the LAN technology instead of widely deployed SONET rings. But first they asked carriers what they needed.

Scully recalls talking with a potential customer in lower Manhattan that had dozens of OC-48 SONET rings.

"That was an eye-opening discussion. . . . They were not going to want to build more

overlay networks to support a different technology," Scully says. "It's not something they can migrate off of easily. It's entrenched in their business processes."

Appian took the hint and set out to create a platform that could carry Ethernet over carrier SONET infrastructures. Now, despite a difficult business climate, the company says it has a multimillion-dollar contract with a big carrier and is expanding its product line and capabilities.

The company's flagship product, Optical Services Activation Platform (OSAP) 4800, lets a service provider's customers tap into the existing metropolitan network through a familiar Ethernet connection in the box, which typically would be located in a building or corporate campus. When needs grow, rather than having to boost bandwidth by traditional carrier means, it can be added in increments as small as 64K bit/sec up to Gigabit Ethernet. Users migrating from ATM or frame relay can replicate the quality of service those technologies provide, Appian says.

At the same time, OSAP lets the carrier use Ethernet where it chooses and still connect to a variety of legacy technologies on the metropolitan network, such as ATM and frame relay. Enhancements announced May 28 give customers and service providers new ways to use Ethernet and SONET, says Karen Barton, Appian's vice president of marketing.

OSAP has a hybrid packet and TDM platform that can handle traditional voice and leased-line traffic, and packet switching. Carriers can encapsulate Ethernet packets in SONET frames, or convert them into frame relay frames or ATM cells and feed that traffic into a conventional device that uses those technologies.

Appian has been focused on helping carriers provide point-to-point links. With the recent announcement, it adds to multipoint services with what it calls virtual Ethernet rings, logical rings that can link sites across a carrier's existing metropolitan network. Those services will let companies link many sites with Ethernet just as they would with a LAN. With just one OSAP in each city, a carrier also could extend the logical ring over a national or international network.

The company also has expanded its line with OSAP 1600, an access device for smaller customer sites, such as small multitenant buildings.

### ■ PROFILE: APIIAN

<b>Location:</b>	Acton, Mass.
<b>Founded:</b>	March 1999
<b>Employees:</b>	118
<b>Primary product:</b>	Optical Services Activation Platform, a metropolitan-area optical access system that utilizes a carrier's existing SONET/SDH infrastructure in the migration to Ethernet services.
<b>Management:</b>	Mick Scully, CEO and founder; Harsh Kapoor, vp of engineering and founder; Anand Parikh, vice president of product marketing & business development and founder; Gregg Savage, CFO and founder.
<b>Finances:</b>	Raised \$80 million from Matrix Partners, North Bridge Venture Partners and Venrock Associates, among others.
<b>Customers:</b>	North American and international carriers, including NTT.

The Telx Group, which operates an interconnection facility in New York, uses two OSAP 4800s on two floors to switch traffic among its customers — carriers that need to link up with other carriers. Those service providers can save money by buying an Ethernet interface into the Telx network rather than a traditional carrier interface such as a DS-3, which may cost 10 times as much, according to Hunter Newby, executive vice president of strategic planning at Telx.

In addition, OSAP 4800 gives them greater flexibility in how much bandwidth they can buy, which is particularly important for smaller customers.

"When a carrier wants to buy just [2M bit/sec], it doesn't have to order a DS-3," Newby says.

The carrier investment drought since late 2000 has hit Appian's potential market hard. Originally looking to competitive local exchange carriers, Appian has since concentrated on incumbents.

A long testing process with NTT Communications paid off earlier this year when Appian announced a contract with the company, which is a spinoff of Japan's incumbent carrier and one of that coun-

try's largest service providers. The company also has two trials ongoing in the U.S., two in Europe and several in the works in the Asia-Pacific region, Scully says.

Appian's approval by NTT gives it credibility with other major carriers, according to Michael Howard, principal analyst at Infonetics Research.

"Once you come out of NTT's labs and become one of their suppliers, you're pretty good for just about any service provider in any part of the world," Howard says.

The company gained a head start over competitors by being the first to use the International Telecommunication Union X.86 specification for Ethernet over SONET, and it can provide for an impressive range of Ethernet services over that infrastructure, he says.

The network strategies of companies indicate strong demand for a product such as Appian's, Howard says. According to a recent Infonetics survey of 80 companies in the U.S. and Canada that have or soon will have an optical connection to a metropolitan network, 85% plan to run Ethernet over it, he says.

Telx's Newby says he believes service providers will see the benefits of Ethernet, but he sees its adoption growing slowly while SONET keeps going strong.

"Everything in the market was going to take a lot of time, but today, given the economic conditions, it's going to take even longer," Newby says.

*Lawson is a correspondent with the IDG New Service's San Francisco bureau.*

### Short Takes

■ At SuperComm last week, **Lucent** announced a universal gateway that lets service providers deliver dial-up IP remote access and voice-over-IP services for their business and residential customers.

**APX 8100 Universal Gateway** is targeted at large carriers, wholesale service providers and ISPs with voice and data IP services requirements such as managed modem applications. It supports up to 12 DS-3s or 8,064 calls, and its universal port technology lets service providers support voice, data, fax and VPN calls on any port using a single digital signal processor module, Lucent says. The APX 8100 will be available in the third quarter.

■ **Atrica** last week announced a new hardware platform release for its A-8800 Optical Ethernet metropolitan core switch. Release 2.0 of A-8800 includes Ethernet-optimized optical capabilities, including integrated Ethernet/dense wavelength division multiplexing. The DWDM system offers up to 32 protected channels with standard 10G bit/sec per channel and 100-GHz spacing. Pricing for modules starts at \$9,000.



### More online!

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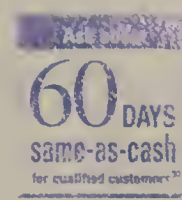
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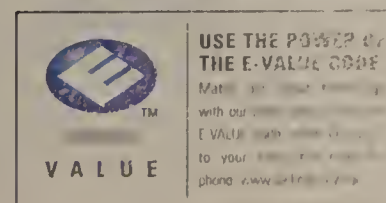
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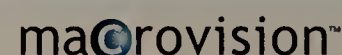
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# Technology Update

■ AN INSIDE LOOK AT THE TECHNOLOGIES AND STANDARDS SHAPING YOUR NETWORK

## XML accelerators help Web servers

■ BY EUGENE KUZNETSOV

Traditional network accelerators speed network applications by moving content closer to users, as in the case of local or global caching, or by off-loading cryptographic functions from servers, as with Secure Sockets Layer accelerators.

However, the growing use of dynamic XML in applications is giving network administrators something new to worry about. XML is a verbose format that creates performance problems. This has spurred the emergence of a new type of network device: the XML accelerator.

XML accelerators off-load XML processing from application servers and Web servers. This is a dramatic departure from the past, given that XML processing traditionally has been considered to be the purview of the application, not the network infrastructure. The benefits of XML accelerators are faster response times and lower project costs.

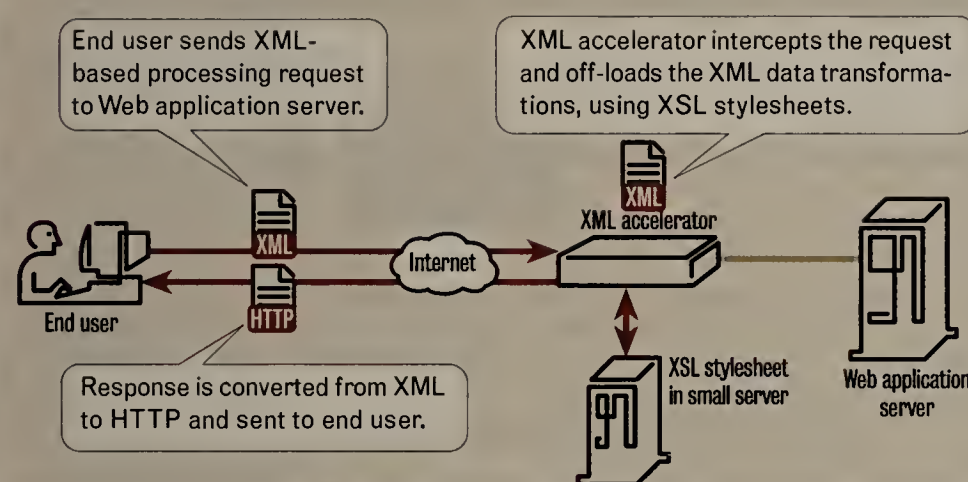
There are many types of XML processing that can be performed at the network level—the two most common are XML redirection and Extensible Stylesheet Language Transformations (XSLT).

XML redirection is similar to URL-switching load balancing. The contents of incoming XML messages are examined and matched against user-defined patterns. XML documents matching a specific pattern can be sent to a corresponding server for further processing, while those matching another pattern can be “redirected” to another server.

This lets application developers and network administrators exercise tight control over which transactions are processed on

### ■ HOW IT WORKS: XML accelerator

XML accelerators off-load XML data transformations from a Web application server.



which servers. Although the same functionality can be implemented in software running on the corresponding servers, there are benefits to performing XML routing in single-purpose XML accelerator devices. Some of the benefits are reduced latencies for XML redirection decisions and eased administration by virtue of separating routing functions from complex applications.

XSLT is a World Wide Web Consortium-specified processing language used to render XML content for HTML browsers and convert between different XML formats. The benefits of XSLT include cross-platform capability (it is supported under .Net and Java 2 Platform Enterprise Edition platforms) and that it is standard and mature (XSLT 1.0 specification was issued in 1999).

By separating presentation from content and data interchange from business logic, it is easier and less expensive to change the appearance of a Web site overnight or connect to new trading partners. But XSLT processing is resource-intensive, and the performance of some high-traffic applications can depend to a significant extent on XSLT processing speed. XML accelerators can be of considerable benefit by off-loading and accelerating XSLT processing beyond what is possible using purely software solutions.

XSLT acceleration for Web servers can be basically autoconfiguring if the site already is set up to use XSL stylesheet processing instructions. In this scenario, a special tag at the beginning of an XML document tells a user agent which XSL stylesheet should be applied to the docu-

ment to make it viewable by the user.

The stylesheet is itself an XML document identified by the processing instruction using a URL. The XML accelerator intercepts the HTTP response, finds the processing instruction in the XML document, retrieves the XSL via the URL, applies it to the XML document and sends the resulting HTML to the end user's browser. Even if the site has thousands of pages and hundreds or thousands of XSL stylesheets, installing and configuring an XML acceleration solution should be simple because the accelerator “learns” the configuration as the processing instructions of XML documents pass through it.

On the other hand, XML redirection often involves more setup and configuration effort. Depending on the vendor, there may be custom scripting or routing rules language involved, but increasingly the trend is toward XPath-based redirection rules. Any existing routing or redirection functionality needs to be factored and included in the joint XML redirection rule set, which is input into the XML accelerator.

An incoming XML document is examined by the XML router and redirected in accordance with the rules in effect for the appropriate server. Technologically, the problem of XML redirection is not as complex as XSLT acceleration, which is part of the reason that the first XML accelerators offered only XML redirection.

*Kuznetsov founded DataPower Technology in 1999 to provide content-aware network infrastructure for next-generation protocols. He can be reached at [eugene@datapower.com](mailto:eugene@datapower.com).*

## Ask Dr. Internet

By Steve Blass

**Our network uses internal DNS behind a Cisco PIX firewall, where the internal network uses private addresses such as 10.1.2.x. We will be setting up a demilitarized zone for the mail server that is currently running behind the firewall. We configured the PIX DMZ network card to use the address 192.168.1.2. How can we connect the internal users to the DMZ servers? Will I have to split the DNS? Or can I use the alias command for the PIX to translate the IP address?**

The alias command should provide the translation you need. List the public IP address for the Web server in the DMZ with your public DNS service provider and place an 'ALIAS (inside\_interfacename) public\_www\_IP\_address DMZ\_www\_IP\_address 255.255.255.255' command in your PIX configuration. When the PIX receives a packet destined for the public www address from an internal user it will get routed to the DMZ www address.

Details can be found in the Cisco documentation at [www.cisco.com](http://www.cisco.com). The PIX documentation is located under Network Security/Security Products. The “examples” pages show configuration details for a variety of installation scenarios.

**Blass is a network architect at Change@Work in Houston. He can be reached at [dr.internet@changeatwork.com](mailto:dr.internet@changeatwork.com).**



## GEARHEAD INSIDE THE NETWORK MACHINE

Mark  
Gibbs



There are many devices out there in network land that want to tell you how they are. And they usually want to tell you because they don't have enough storage to wait for you to ask. We're talking the likes of routers, firewalls and switches.

The service these devices use for reporting is called syslog, which along with SNMP traps, logging to a local text file and console logging, are the four main ways of reporting conditions and exceptions. Actually the syslog service can be used by any process — there are tools to syslog-enable Windows NT, for example.

Syslog is a relatively old protocol that was first documented as an Internet Engineering Task Force request for comments in 2001. This document, RFC 3164 ([www.ietf.org/rfc/rfc3164.txt](http://www.ietf.org/rfc/rfc3164.txt)) is titled "The BSD syslog Protocol" and the RFC explains:

"This protocol has been used for the transmission of event-notification mes-

# As easy as falling off a syslog

sages across networks for many years. While this protocol was originally developed on the University of California Berkeley Software Distribution TCP/IP system implementations, its value to operations and management has led it to be ported to many other operating systems as well as being embedded into many other networked devices."

The architecture of a syslog logging system consists of machines generating messages that are called "devices" (or "senders") and machines that receive the messages called "collectors," more commonly (and incorrectly) called "syslog server" (they actually act as clients to which the devices "push" messages).

A syslog system also can include machines that receive device messages and forward them to other machines. These are called "relays," and there can be any number of them chained between a device and the final collector.

Some devices can send syslog messages to multiple collectors, and relays might also filter messages so for example, only critical messages are forwarded. In this case the relay also acts as a collector and, like a device, might relay to multiple collectors.

Syslog messages usually are transported by User Datagram Protocol (UDP), al-

though some devices and collectors can use TCP for reliable messaging (remember that UDP is only a "best effort" service). The port assigned to syslog is 514, and it is recommended that the source port also be 514 to indicate that the message is from the syslog process of the sender.

A syslog message has three parts: The first is called the PRI; the second the HEADER; and the third, the MSG. The total length of the packet cannot exceed 1,024 bytes, and there is no minimum length.

The PRI part indicates the priority of the syslog message and consists of one to three characters, enclosed in angle brackets, for example: "<1>," "<23>" and "<203>" are valid PRI contents. The PRI code is formed from two values: a facility code and a severity code.

There are standard facility codes, for example "0" is for kernel messages (gotta love \*nix), "1" for user-level messages, "2" for mail system messages and so on.

There also are severity codes: "0" is for "Emergency: system is unusable," "1" is for "Alert: action must be taken immediately" and so on (see RFC 3164).

The actual PRI code is derived by multiplying the facility code value by eight (that is, a three-bit left shift) and adding the severity code value. The only time the PRI code should start with "0" is if the PRI part

is "<0>" (for example facility and severity are both zero).

The HEADER consists of two fields: the TIMESTAMP and the HOSTNAME. The TIMESTAMP (formatted as "Mmm dd hh:mm:ss") immediately follows the trailing ">" of the PRI part and a single space character follows the TIMESTAMP and HOSTNAME fields. HOSTNAME should contain the hostname or if that isn't available, the device's IP address.

The MSG part is what you might guess — a text message that explains or clarifies the PRI code. It has two subparts: a TAG of up to 32 characters that names the program generating the syslog message, and CONTENT that contains the actual text.

Any nonalphanumeric character is considered to terminate the TAG field and is assumed to be the starting character of the CONTENT field.

Typically this character has been a left square bracket character ("["), a colon character (":") or a space character.

So from RFC 3164, here's an example of a valid syslog message:

<34>Oct 11 22:14:15 mymachine su: 'su root' failed for lonvick on /dev/pts/8

Next week, more theory and a killer syslog collector.

Your status to gearhead@gibbs.com.



## CoolTools

Quick takes  
on high-tech toys  
By Keith Shaw

# Copying DVDs: Is it worth the time?

copying DVDs onto a CD takes a long time, maybe almost too long to be worth the effort.

## 1, 2, 3

There are three steps in the copying process. First, you copy the DVD content from your DVD drive onto your hard drive. The software warns you that you will need between 4G and 6G bytes of space. Yes, gigabytes.

Then you convert the DVD content into a suitable video format (MPEG-1, MPEG-2 or DivX). The software suggests MPEG-1, so I went that route. This is where the length of time kicks in. Converting the file into MPEG format took four hours and 20 minutes on a Pentium III computer with a 450-MHz processor. Of course, the faster your computer the faster the process. The software says the encoding process could take between two and 10 hours for this step.

After you've created the MPEG file, you can watch the movie on your computer. Or you can go to the third step — writing the file onto a CD-R disk. Because most CD-R disks hold only 80 minutes of content, most movies will be burned from one DVD onto two CD-R disks. This step did not take as long to do, but there are several issues that can still pop up. I found out that during the MPEG file creation that I chose a wrong button, which created a 789M-byte MPEG file that wouldn't fit onto my 700M-byte disk.

When you have your final created disk, you can play it on a DVD player (as long as it can play the Video CD format). Because of all the compression that took place, the final

version is not the same quality as the original DVD. And if you've had to split up the MPEG file to get the movie to fit onto the two CDs, you'll have to switch disks.

After about five hours, I got the back-up copy of my DVD movie onto two disks. Granted, you won't be sitting in front of the computer for the complete five hours, as the software works in the background and you can do other stuff while it is copying, converting or writing the DVD.

However, if you still want to

attempt this, here are some suggestions that can shorten the time involved:

- Get a computer with a fast processor and a huge hard drive. Also, make sure you try this with Windows 2000 or XP, as I had some problems with Windows 98 Second Edition.
- Make sure the computer has a DVD drive and a CD writer drive.
- Check that your MPEG files will fit onto the CD-R disk before you convert.

For more information on the DVD Copy Plus software, go to [www.321studios.com](http://www.321studios.com).

Shaw can be reached at [kshaw@nww.com](mailto:kshaw@nww.com), when he's not trying to copy his DVD collection.

Just because you can do something doesn't mean you should. I was reminded of this while testing 321 Studios' DVD Copy Plus software. The software lets you copy DVD movies onto less-expensive CD-R disks, without using a DVD writer drive, and only costs \$40.

The software was outstanding in displaying the process of converting DVD content into a format that could be written onto a CD. It includes a great tutorial that guided me through the steps. But there's a catch — the process of



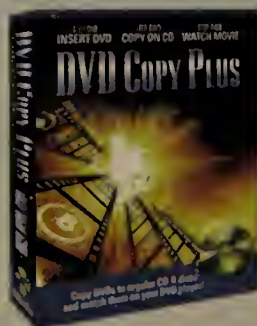
## Net Results

### DVD Copy Plus

★★★★★  
3.5 out of 5  
RATING

Company: 321  
Studios, [www.321studios.com](http://www.321studios.com)  
Cost: \$40.

**Pros:** Outstanding tutorial on how to convert DVDs to a CD-R disk. Software was honest about the length of time needed to convert the content. **Cons:** Needs a superfast computer and Windows XP/2000 to reduce conversion time; need to download updated driver for proper operation.





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## EDITORIAL

John Dix

## What's 'broadband' in the policy debate?

**T**he need for a national broadband policy was one of the hot potatoes tossed around the recent Vortex conference in Southern California, the *Network World* invitation-only gathering that brought together industry thought-leaders to assess where the industry is and where it is going.

Intel CEO Craig Barrett said unequivocally yes, we need a broadband policy because it is in the best economic interest of the country. DSL and cable modems aren't broadband, Barrett said. They are incremental improvements over what we have now. What he and other tech leaders want the government to push for is 100M bit/sec Internet links to 100 million homes by the end of the decade.

Most other Vortex speakers, however, look at DSL and cable modem as broadband. Robert Pepper, chief of the FCC's Office of Plans and Policy, said 80% of U.S. households have access to broadband cable modem or DSL service today and that will rise to 90% by year-end.

In terms of acceptance, Pepper says broadband took only four years to penetrate 10% of all homes, making it one of the most rapidly accepted technologies ever, as fast as PCs and DVD players.

That led Paul Johnson, a technology analyst with The Equality Research Department of Robertson Stephens, to question the need for a national broadband policy. Broadband has one of the fastest consumer uptakes in history and yet it's broken? There is no need for a policy, he said, because competition is the best policy.

But broadband as we know it today isn't changing things dramatically. William Raduchel, CTO with AOL, pointed out that it doesn't save the average consumer any time. People log on, do some messaging and check some stocks. With broadband it takes 22 minutes vs. 25 minutes.

The broadband vision backed by Barrett and other tech CEOs is a different animal. Connecting households to the Internet at 100M bit/sec would lead to substantial change, particularly in the fields of entertainment and probably in other areas we have yet to envision.

Getting there may, in fact, require the government's help. These speeds are beyond the pale of current DSL and cable technologies. And consider what government development of highways meant to trucking and commerce and even recreation.

But we can't argue sensibly about the need for a national policy until we agree on what broadband is and how much bandwidth is required to achieve change. Let's start there.

— John Dix  
Editor in chief  
jdix@nww.com

### Can the spam

The story "Antispam tactics" ([www.nwfusion.com](http://www.nwfusion.com), DocFinder: 9727) is more of a list of what should be done to help alleviate spam. It would help if you briefly explain why each action should be implemented. What effect does each action have on the overall performance of corporate or private e-mail?

Herb Strohsahl

Senior communications engineer  
Securities Industry Automation Corp.  
New York

### Compulsory ad-viewing

Regarding Scott Bradner's column "Fast forward as theft" ([www.nwfusion.com](http://www.nwfusion.com), DocFinder: 9728): Good grief! The notion that we are required to watch commercials — otherwise, we are "stealing" — is ludicrous. Bradner is correct — shall we next be forced to read all ads in magazines and newspapers? If we're all legislated to view TV ads, what's the incentive to ad agencies to develop high-quality, entertaining commercials that people *do* want to watch?

It's bad enough that ads are being "pushed" through all types of media — even my gasoline pump. This thinking makes me want to turn off my TV for good and invest in Parker Brothers.

Debbra Buerkle

HR/compensation and benefits manager  
Fluke Networks  
Colorado Springs

### Windows washing

Anyone who reads "Persistent doubts dog Windows 2000" ([www.nwfusion.com](http://www.nwfusion.com), DocFinder: 9729) and doesn't think of Novell's NetWare as the obvious

E-mail letters to [jdix@nww.com](mailto:jdix@nww.com) or send them to John Dix, editor in chief, Network World, 118 Turnpike Road, Southborough, MA 01772. Please include phone number and address for verification.

solution to these Windows problems probably wouldn't know what Linux is anymore than they would know how to install it.

Gartner's John Enck states, "The big issue is how do you update components like Active Directory." The answer is to separate from the server operating system like Novell did with eDirectory. As soon as that is done, you can release updates to the directory product independent of the server.

Jeff Couillard

Senior network engineer  
Clayton Group Services  
Novi, Mich.

### Adios, frame relay

"Braving the move from frame relay to IP VPN" ([www.nwfusion.com](http://www.nwfusion.com), DocFinder: 9730) is an excellent story. I'm in the process of doing the same thing on my company's WAN, but on a much larger scale. I'm a bit concerned that Waters Corp. has had some problems with ISDN dial backup on its Cisco equipment, though. With the advent of IOS 12.2.8T, there are solutions that are simple to implement.

Josh Bovee

Lenexa, Kan.

### More on multicasting

"IP multicasting comes of age" ([www.nwfusion.com](http://www.nwfusion.com), DocFinder: 9731) does a good job of explaining multicast routing. However, it doesn't mention Class D addressing requirements or what a user needs to get started with IP multicasting.

A separate story should discuss user requirements, access to dial users and how a user would implement multicasting across several network providers.

Jerry Hanson

Business applications sales manager  
Sprint  
Omaha, Neb.



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## BOTTOM LINE

Joel Snyder

**W**ith all the talk about terrorism and the clear and present danger of future attacks, a technologist's mind naturally turns to information warfare. What if the next attack is not against a building or an airport or a shopping mall, but against the Internet?

That would be great, frankly. I'd rather go for a whole month with the Internet in shreds than see another person hurt.

The question of the Internet's vulnerability to terrorism came up at a *Network World* Security Town Meeting that I co-hosted last month. (If you want to hear about the hottest issues in security, connect to [www.nwfusion.com](http://www.nwfusion.com), DocFinder: 9726, and sign up for the next free town meeting.) Could the whole Internet be taken down? No. But you could take down such huge chunks that there wouldn't be much left to worry about.

How could you take down most of the Internet? Border Gateway Protocol (BGP) is one easy way to start. The entire Internet depends on huge BGP tables of more than 100,000 routes. In the early days, these tables were validated against routing registries that ensured bogus information could not be injected into the tables. Nowadays, that doesn't happen. Keeping those routing registries updated and synchronized is just too expensive and inconvenient.

The lack of a global routing registry means that it's fairly easy to cre-

# Next terror target: The Internet?

ate routes to nowhere. It doesn't happen a lot, but it's happened in the past, more than once. Someone gets mad at someone else, or transposes a couple of digits, or lets information leak from inside their network, and adds a route to the global tables. Suddenly the packets stop flowing in the right direction.

If a determined attacker were to start injecting routes into the BGP tables, the ripple effects could be enormous. Every time a route is added, information propagates over the entire Internet — the core routers at every major (and many minor) ISP have to process the update. Add enough bad routes in enough locations, and the multiplied effect of processing and passing all that information around could cripple routers around the world.

Is it trivial for someone to take down the entire Internet? No, definitely not. It would take brains, coordination and control of zombie

systems and routers at dozens or hundreds of ISPs. But as we learned when distributed denial-of-service attacks started showing up, there are a lot of clever people on the Internet who have malicious intentions. All the more reason to keep working on your disaster-recovery plan.

*Snyder, a Network World Test Alliance partner, is a senior partner at Opus One in Tucson, Ariz. He can be reached at [Joel.Snyder@opus1.com](mailto:Joel.Snyder@opus1.com).*

**How could you take down most of the Internet? Border Gateway Protocol is one easy way to start.**

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## INDUSTRY COMMENTARY

Frank Dzubeck

**I**ncreasing worker productivity at minimal expense has become the mantra of the corporate world. To accommodate ever-increasing corporate demands for improved productivity, a new concept called grid computing has evolved. Essentially, a grid is an amorphous IP network that links heteroge-

neous servers, storage devices, clients, appliances and software to form a transparent virtual resource that can be dynamically allocated, accessed and shared by users and applications.

To be successful, a grid must evolve through three stages:

- **Intragrid:** Allows interdepartmental resource sharing within an organization. Helps minimize capital expense through the aggregation of servers and storage.

- **Intergrid:** Allows partner access and sharing across multiple organizations. Increases productivity and allows sharing of operational expenses through sharing of heterogeneous databases, collaborative design and acceleration of product delivery.

- **Extragrid:** Delivered by a new class of vendors called grid service providers, allows enhanced productivity and savings through services such as on-demand e-business, e-learning and e-commerce.

What makes a grid different from today's distributed computing? Everything! By definition, grids allow access to software and to computer and network resources; are language- and platform-independent; and allow dynamic resource discovery and brokering. To make all this happen, several key attributes must exist. A grid must deliver transparent quality of service (QoS) such as seamless integration with IT resources, database abstraction, distributed compute clustering and distributed workload management. It also must transparently deliver comprehensive virtualization no matter the platform, resource, location, migration path, replication methodology or failure type.

For a grid to achieve even a modicum of success, it requires a minimal-cost, on-demand, ubiquitous, broadband-based network with near-zero latency for connectivity and transport. In the intragrid stage, this can be easily achieved through internal infrastructure investment with-

in the organization. The problem begins in the intergrid stage, involving interconnection among different locations within the company or between the company and other organizations. To make this work, the company must evaluate the availability of wide-area access at local-area speeds. To achieve zero latency, a grid requires Ethernet access at a minimum speed of 100M bit/sec and backbone interconnectivity at gigabit-per-second speeds.

This is feasible, considering the high availability of unlit-fiber capacity within the metropolitan and long-haul networks of global carriers. Infrastructure technology exists for Ethernet access over cable, copper, fiber or wireless. What has not existed is the business drivers or applications requiring high on-demand bandwidth capacity. A grid will be the "killer" application that acts as a driver to force companies to upgrade their bandwidth requirements. As a direct result, a grid also will force carriers to deliver equitably priced, usage-based, on-demand bandwidth transport capacity.

The computing industry is united in its pursuit of grid standards. IBM, Hewlett-Packard and Sun have announced strong initiatives in this area. Software vendors have united around Web services for applications communication. Experimental grids exist in education and government communities. The key missing elements — management and security — are known problem areas that are being addressed.

Grid feasibility is a proven fact, but to meet enterprise demand by 2004, carriers must enter onto the scene this year. They must start now to plan and deliver economical yet profitable VPN services, inclusive of Ethernet access, QoS and on-demand broadband transport, that will evolve into the next-generation Internet required by a grid. The carriers have found their "killer" broadband application. The perplexing question is can they, given their current morbid state, meet the bandwidth service demands of customers for grid implementation, or will they be the limiting factor to corporate and global economic growth?

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**What makes a grid different from today's distributed computing? Everything!**

# The next killer app: A grid





# Working out kinks in the retail supply chain

Merchants look to supply-chain management tools to improve demand forecasts and trim operating costs.

■ BY ANN BEDNARZ

A crystal ball would be a welcome addition to any retailer's arsenal of supply-chain management software. Barring that, Shaw's Supermarkets aimed for the next closest thing — a tool that helps the grocer model the effects of any tweaks to its supply chain.

Shaw's uses i2 Technologies' Supply Chain Strategist software to help align its distribution network, which consists of two distribution centers, 185 stores and a third-party distribution partner.

i2's Strategist is a scenario-based application — one module in i2's suite of supply-chain management (SCM) software — which lets Shaw's input data such as distribution capacity, store locations and operations costs. The software crunches the data so Shaw's can analyze different alternatives.

Strategist lets the company perform what-if scenarios — such as “what happens if we increase the number of deliveries made each week to a particular store?” — and see the answer in minutes, says Mike Griswold, strategic process leader for supply-chain operations in West Bridgewater, Mass. “One of the things that Strategist provides is the ability to see how much our decisions are going to cost us,” he says.

Shaw's has realized significant savings in storage, handling, inventory and freight costs by using the Strategist tool to help make decisions about which products and stores should be served by one of its distribution centers.

Incremental savings such as these are key in the retail industry, where profit margins are traditionally razor-thin. Retailers can boost the bottom line by using SCM software to squeeze out inefficiencies that occur in the process of getting products to the right stores, at the right time and in the right quantity.

SCM software costs vary widely. In general, a large retailer will pay in the \$2 million range for a full warehouse-management system license; best-of-breed apps cost \$200,000 to \$400,000, estimates Peter Abell, director of research for retail at AMR Research. For a retailer to revamp its entire processes can be astronomical: One large national retailer had a multiyear contract that cost approximately \$50 million, Abell says.

Among the SCM projects given priority today are those that aim to improve store-level forecasting. Retailers want greater visibility into what's going on not only at distribution centers but in each store, experts say. A handful of vendors specialize in retail SCM software, such as Retek, JDA Software and Manhattan Associates, and generalist SCM

vendors with retail-industry coverage, such as i2, Manugistics Group and SAP.

“Retailers have started to recognize that the supply chain really goes down to the individual store,” Abell says. The better retailers are addressing demand replenishment on a store-by-store basis and incorporating “causal factors” into their forecasts, he says. For a local event such as a Little League championship, one store might want a healthy stock of lawn chairs and picnic accessories.

Key to avoiding overstocks and out-of-stocks is communication among retailers and suppliers. The hot trend is collaborative planning, forecasting and replenishment (CPFR). CPFR is a concept developed by the Voluntary Interindustry Commerce Standards (VICS) association, which has outlined nine steps that constitute CPFR.

CPFR is based on retailers and suppliers sharing forecast information that is traditionally kept guarded from business partners.

Ace Hardware is doing CPFR with 26 of its suppliers, says Scott Smith, department manager for inventory at the Oak Brook, Ill., hardware chain. The arrangement lets Ace suppliers such as Manco, a manufacturer of home improvement supplies including duct tape, gain access to Ace's systems — which are built on JDA Software's E3 suite of SCM software. From there, suppliers can collaborate with retailers on sales forecasts and promotions planning and even write their own purchase orders.

The appeal of CPFR is that it capitalizes on each party's particular strengths, Smith says. Ace knows product demand histories for each of its stores, and Manco has product knowledge and insight into seasonal and geographic buying trends. Sharing ideas makes for more accurate forecasting and more efficient replenishment.

The extra sets of eyes are key. “When you do things in isolation, you don't give people the opportunity to help improve your product,” Smith says. The efficiency gains show up on the bottom line: Among the initial group of Ace suppliers doing CPFR, sales of their products in Ace stores rose 10.3% in 2001, Smith says. For Ace, the collaboration has helped the company triple its full-palette purchases — which are more economical than partial-palette buys — and trim 20% off labor costs associated with receiving mer-

chandise from its CPFR partners.

Smith says the project paid for itself in 30 days, essentially because Ace's investment was minimal. Ace paid less than \$50,000 because the company was a pilot tester for the JDA Software.

Ace is doing CPFR with 26 manufacturers. Combined, the group handled \$97 million in purchases last year through CPFR. Smith's goal is to hit \$200 million this year.

The scale of Ace's CPFR trial puts the retailer among the very early adopters of the technology. While many companies have experimented with limited pilots, few do widespread CPFR. Part of the reason is that implementing CPFR is a labor-intensive process and requires that retailers' and suppliers' systems can communicate.

At its most basic level, CPFR software is like integration middleware; it provides a platform for exchanging transaction data and often depends on batch processes to

## RETAIL: AT A GLANCE

- The retail trade industry contributed \$894 billion to the gross domestic product in 2000, according to the Bureau of Economic Analysis.
- AMR Research found that retailers on average will commit 2% of revenue to their IT budgets in 2002. That figure is relatively unchanged from 2001.
- Supply-chain optimization is an ongoing effort. AMR Research estimates that retailers will spend 15% of their IT budgets this year on application licenses. Of that allotment, 17% will go to SCM. For a \$1 billion retail company with an IT budget equivalent to 2% of its sales, that translates into about \$510,000 spent on SCM software.

port data to and from outside systems. As the technology matures, CPFR will move toward process-oriented, real-time collaboration.

Much of the implementation complexity is because of variations in the data different systems collect, according to Gartner. Supply-chain collaboration software typically looks at an account or retail-store level, while existing systems forecast demand at a regional level. Integrating CPFR pilots with existing systems can require companies to reimplement their demand-planning systems to reconcile differences in data granularity, Gartner says.

A lack of standards also is a deployment deterrent, although progress is occurring. Standards bodies Uniform Code Council and its European equivalent, EAN International, are cooperating to create CPFR standards, including new XML schemas. Last month, a handful of SCM vendors, including JDA, i2, Manugistics, SAP and Syncra Systems, announced plans to test the interoperability of their CPFR products this summer. ■



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## Secure SOHO routers

■ BY JAMES GASKIN, NETWORK WORLD GLOBAL TEST ALLIANCE

## Efficient Networks and NetGear bundles earn top honors

**Y**ou face a tough balancing act when sending workers to remote or home offices. You need to equip them with a broadband connection, but also you need to keep your network safe without spending a bundle. There are still more choices to navigate. Some DSL providers include a modem when you sign up for their service, some don't. Others lease you a modem or modem/router, or let you select your own from an approved vendor list.

To help you decide which modem/router might work best in your network, we tested four units (from Cisco, Lucent, Efficient Networks and 2Wire) that included the DSL modem and two routers (NetGear and ZyWall) that rely on a broadband modem for the connection. Vendors opting not to participate in our test included Allied Telesyn, NetVanta, NexLand, MultiTech Systems and SonicWall.

Growing competition in this market means security features formerly reserved for high-end routers (such as the stateful inspection firewall feature we required for inclusion here) now appear in more affordable units (those less than \$800 as required in this test) targeting small offices. We assessed how each fits this new security bill, and evaluate each for its ease of setup and remote-management capabilities.

Efficient's 5930 Business Gateway and NetGear's FR314 earned the Network World Blue Ribbon award for being best-suited to the small office market. Good setup, strong security and neophyte-friendly network management software put these units ahead of the pack.

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## Efficient DSL modem/router combos

All necessary cables came in the box with the Efficient 5930, including a DSL cable and RJ45-to-serial adapter for use with the console port. The Quick Start flyer gave clear directions and supplied the administrative user name and default password.

In the name of safety, the Efficient 5930 forced a password change immediately. It also presented a "Firewall Scripts" page, requiring you to choose maximum, medium, minimum or no firewall protection. Users can ignore security, but they have to do it consciously.

The only setup hitch came when we tried to configure the eight-port 10/100Base-T hub on the 5930 before plugging in the DSL. Because the DSL link was inactive, the 5930 disabled the Dynamic Host Configuration Protocol (DHCP) server so that clients couldn't

receive the IP address for connection to the 5930. Customers eager to start their networks before the DSL line is active should take note.

Stateful inspection goes beyond basic IP firewalls by tracking the state of the communications between outside and inside systems. Incoming packets must contain information about a session in progress, not just a valid IP address and port number.

## Net Results

3.5

RATING

Efficient 5930  
Business Gateway

**Company:** Efficient Networks, (877) 937-5273, www.efficient.com  
**Cost:** \$700 **Pros:** Complete installation package, forces password change, offers security "scripts" during setup, modem backup.  
**Cons:** Must make DSL connection before setting local networking.

3.5

RATING

## NetGear FR314\*

**Company:** NetGear, (888) 638-4327, www.netgear.com  
**Cost:** \$200 **Pros:** Complete installation package, forces password change, automatic hacker protection.  
**Cons:** Administration screen sometimes needs a reboot during changes.

3.1

RATING

## 2Wire HomePortal 1000

**Company:** 2Wire www.2wire.com, (877) 349-3304 **Cost:** \$200  
**Pros:** Stylish, space-saving design, complete installation package, game-playing profiles preconfigured.  
**Cons:** No forced security password or activation, little depth to firewall settings.

3

RATING

## ZyWall 10\*

**Company:** ZyXel Communications, www.zywall.com, (800)255-4101 **Cost:** \$550  
**Pros:** Complete installation package, automatically guards against some attacks, forced password change.  
**Cons:** A few extra clicks required for firewall setup.

2.8

RATING

## Cisco 827

**Company:** Cisco, (800) 553-6387, www.cisco.com/warp/public/cc/pd/rt/800/index.shtm  
**Cost:** \$650 **Pros:** Complete installation package, Web interface to router information.  
**Cons:** Changes require command-line knowledge, security settings hidden.

2.7

RATING

## Lucent CellPipe 50

**Company:** Lucent, (866) 582-3688, www.lucent.com  
**Cost:** \$750 **Pros:** Required cable not included, router setup challenging.  
**Cons:** Firewall setup via point and click, store up to three configurations on router.

## What's the score?

	Efficient 5930 Business Gateway	NetGear FR314*	2Wire Home Portal 1000	ZyWall 10*	Cisco 827	Lucent CellPipe 50
Security Control 40%	3.5	3.5	2.5	3	2	3
Management Flexibility 30%	3	3	3	3	3	2
Ease of use & Installation 20%	3	3	3	3	3	2
Documentation 10%	3	3	3	3	2	2
<b>TOTAL SCORE</b>	<b>3.5</b>	<b>3.5</b>	<b>3.1</b>	<b>3</b>	<b>2.8</b>	<b>2.7</b>

**Individual category scores** are based on a scale of 1 to 5. **Percentages** are the weight given each category in determining the total score. ■ **Scoring Key:** 5: Exceptional showing in this category. 4: Very good showing. Although there may be room for improvement, this product was much better than the average. 3: Average showing in this category. Product was neither especially good nor exceptionally bad. 2: Below average. Lacked some features or lower performance than other products or than expected. 1: Consistently subpar, or lacking features reviewed. \*Denotes router-only products.



Efficient's Web Manager interface mini-  
nized the task of creating a firewall rule.  
Command buttons for create and modi-  
fy/view start the rule-making process,  
with drop-down menus listing protocols  
and applications to consider in the rule.  
Radio buttons let you choose protocols  
(TCP, User Datagram Protocol [UDP],  
Internet Control Messaging Protocol,  
Simple Mail Transfer Protocol [SMTP] and  
others), and only port number and IP  
address number ranges must be typed in.  
Security is never a no-brainer, but creating  
rules doesn't get much easier than picking  
from a menu and checking boxes.

This Efficient model includes a 56K  
modem for backup so that when a DSL link  
drops and subsequently is revived, the  
switching between the DSL and 56K link  
occurs automatically. Users with a modem  
or another WAN link will appreciate the  
support for an external modem on the con-  
sole serial port.

The clean Web interface makes unit man-  
agement straightforward. Eighteen menu  
options help navigation.

The most consumer-oriented product in  
terms of packaging and software presen-  
tation that we tested is the 2Wire Home-  
Portal 1000, which comes in a stand-up  
case that saves desktop space.

Start-up help focuses on the ways the  
2Wire product can connect to a home net-  
work, including Ethernet, Universal Serial  
Bus and 802.11b. There was not much  
information covering DSL connection or  
security.

The internal DHCP server parcels out IP  
addresses in the 172.16.x.x range. This ad-  
dress range is unroutable (over the Inter-  
net) but vendors normally use the 10.0.0.0  
or 192.168.x.x. This unique addressing  
probably will not interfere or overlap any  
existing network.



## More online!

- Read about why stateful firewalls matter.

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- Check out our test methodology.

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- SOHO online Buyer's Guide. Want more product information on network products specifically for the SOHO market? Head online to our special online Buyer's Guide chart, where we provide information on 51 products from 14 companies:

3Com	Linksys
Actiontec Electronics	MultiTech Systems
Adtran	NetGear
Asante Technologies	NexLand
Belkin Components	SMC Networks
Cisco	Symantec
D-Link Systems	ZyXel Communications

**DocFinder: 9724**

## Going the distance

**D**SL speeds depend greatly on the distance from the DSL modem in your office to the phone company's central office or fiber-optic repeater. Each DSL modem's ability to support long distances, and accurately measure the distance, remained hidden until recently.

DSL test equipment manufacturer Telebyte ([www.telebytebroadband.com](http://www.telebytebroadband.com)) provided a Model 458 Line Module and Multiline Simulator for our testing. The 458 tests modems over specified distances and verifies that they perform to specifications.

The good news is that we could verify that all four of the DSL modem-equipped routers passed our distance tests, responding with minor variations across a range of 1,000 feet to 20,500 feet.

— James Gaskin

Propping up the "HomePortal" self-tag, 2Wire loaded client software on multiple systems for easy sharing. User and network management screens, heavy on icons, provide good help supported by additional control screens placed on PC taskbars and context menus.

Unwelcome for a home-oriented system was the lack of a forced password or any depth to the firewall configurations. 2Wire offers a decent set of inbound and outbound firewall filters, but no port control options. All inbound data traffic gets filtered for known hacks, but to trust the vendor's settings and filters because a user can't change them. HomePortal includes an upgrade link on its client page for one-click automated upgrades.

Regular Cisco users might be shocked, but the Cisco 827 product we tested ships with color-coded plugs and cables. A CD-ROM labeled Fast Step provides easy, Web-based installation.

For management purposes, users can see all the Cisco IOS settings via a browser, but many can't be changed without knowledge of Cisco's command-line interface. Still, we favor this approach because the Web interface won't threaten remote workers who need to change their own information but it does let more technical support staff perform normal IOS operations when necessary.

Features aren't lacking in the 827, but you need to know how to find them. To control which packets open to stateful inspection, you must dig into PDF documentation. We suggest a trip to the Cisco Web site for real examples of "context-based access control."

Lucent's CellPipe 50 includes a serial nine-pin to 25-pin adapter, but not a serial cable, which you can't do without in this case. The main configuration window is archaic, resembling the long-retired Ascend ISDN router. Control-n moves the cursor from one item to the next inside the VT100 display. When a service provider sells the CellPipe 50, it uses the Turn-up software for automatic configuration. Just hope you don't have to change a configuration setting yourself.

Firewall configuration mercifully avoids the ancient VT100 display screen in favor of the surprisingly adept SecureConnect

Manager application. This tool is a bit complex but offers excellent flexibility. Multiple firewall configurations can be saved, modified, deleted or loaded from any Windows workstation, and three can be stored on the router.

Lucent plays a role in this market because of its Bell roots and its ability to sell equipment to providers, not because it makes a consumer-friendly product.

### Broadband routers only

The NetGear FR314 fits between the DSL (or cable) modem and the PC. It includes four 10/100Base-T ports to support PCs directly or via a link to a hub.

The setup wizard forces you to set a password, configures DHCP based on information queried from your broadband provider and automatically protects against a variety of hacks. The 134-page electronic manual provides clear, but not deep, help.

The content firewall filters are set via a browser-based administrative page. It's easy to block URLs with particular keywords. To check the value of a setting, you can tap the "Log only" function and examine your changes before completely blocking access. Time settings also are supported.

Stateful inspection rules are set in the Web administrative interface. Check boxes make it easy to block all of one type of service, such as Network News Transfer Protocol (NNTP) or ping packets.

Proxy servers can be set for any of the eight major protocols controlled (HTTP, FTP, SMTP, Post Office Protocol 3, DNS, NNTP, Ping and Key Exchange). To create new rules, type the rule name, fill in the IP port range and pick the protocol and service from menus.

The router and firewall log files are easy to configure and view from the left-hand menu tree. Quick reports, including Web site hits and addresses ranked by traffic, are two clicks deep.

Another consumer-friendly, router-only product, the ZyWall 10 included color-coded cables and a short Read me first booklet. It offers one 10/100Base-T Ethernet plug to connect to a single PC or wiring hubs supporting up to 32 systems.

Installation was quick because the ZyWall 10 provided IP addresses to clients

through DHCP, translated the IP addresses when routing to the broadband connection, and demanded the default password be changed before continuing.

The firewall component is enabled at start-up and guards against denial-of-service attacks and blocks incoming BootP requests automatically.

A content filter list with 13 potential blocking points and time of day settings mirrors the same function in the NetGear router. You can exempt individual computers or entire IP address ranges from content filtering. Packet-filter rules are built by clicking lists of commonly blocked packet types and setting blocking and logging choices.

### Summary

Users have to decide for themselves whether they want to use a combination DSL modem/router package or employ a separate DSL modem and router. The convenience of a single unit, offered by 2Wire, Cisco, Lucent and Efficient must be balanced by the value of cleanly separating the phone company's responsibility from your own network. Using a NetGear or ZyWall unit to link a network to the phone company sets a clear point of demarcation and a clear point of responsibility for the broadband provider.

So if you decide you'd prefer the convenience of the combination DSL modem/router, we favor the Efficient 5930 because of its security depth and ease of management.

If you want to go with the router-only option, the differences between the NetGear FR314 and ZyWall 10 are slim, but we lean slightly toward the NetGear because its security administration was a tad easier.

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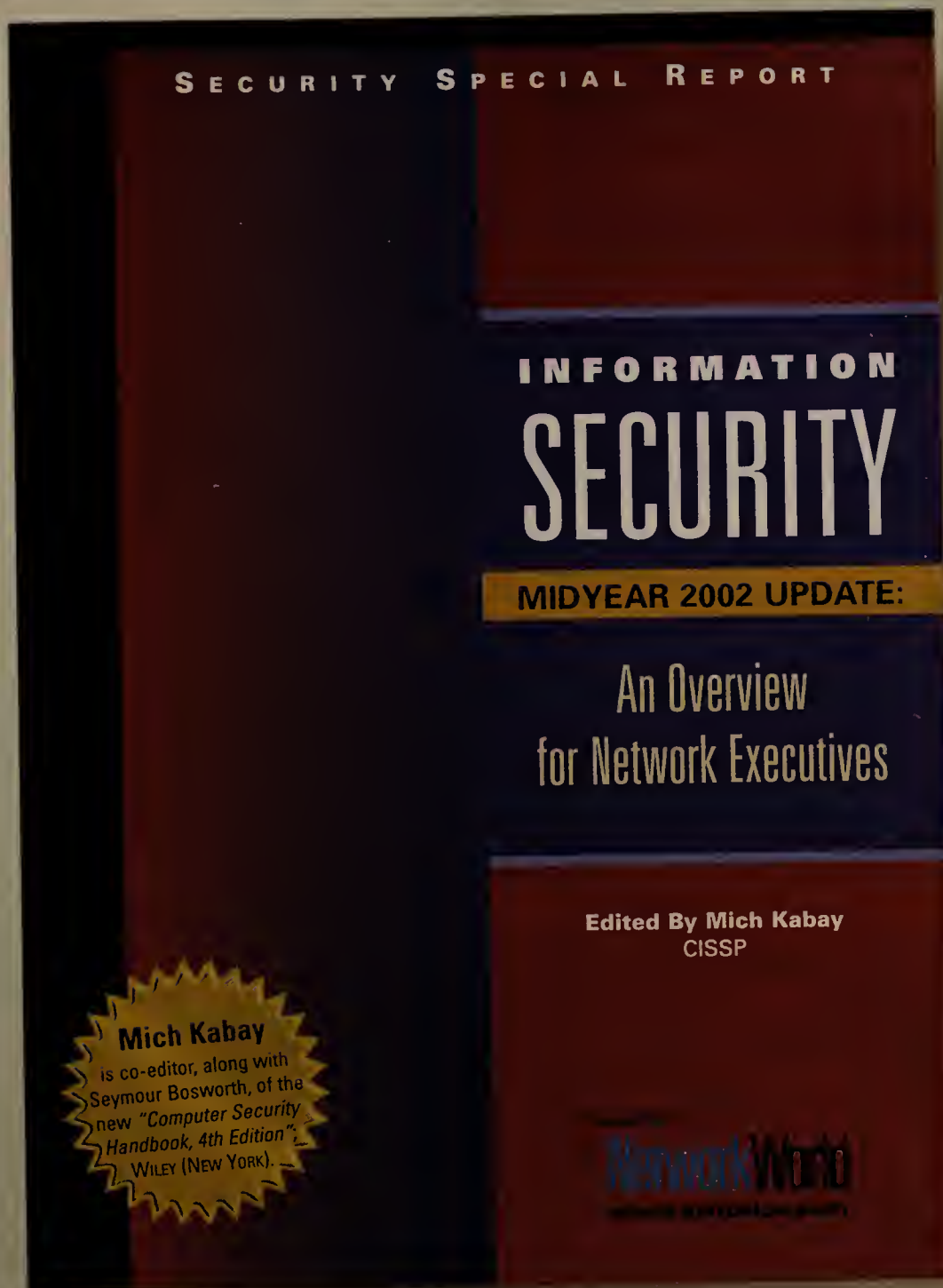
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## Management

# Strategies

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## The power of users

Raising the technical skills of proficient users extends IT's reach and reduces basic help desk calls.

■ BY SUZANNE GASPAR

With only 12 IT pros to support 4,000 users, it's no wonder the help desk of Johns Hopkins University's School of Public Health scrambles to field calls. Still, the burden on IT isn't as large as it could be thanks to tech-savvy power users who help their peers.

Support staffers can't spend time showing users how to create Microsoft Word tables or add audio clips to a presentation, but that's where colleagues come in. Such folks can answer questions from users who lack basic knowledge or are afraid of breaking the computer.

Nathan Kale, manager of user services for the school in Baltimore, hasn't tracked the phenomenon, but hears from users who boast that a peer showed them how to do something they had struggled with for weeks. "It reduces the number of help desk calls," Kale says of neighborly assistance. "You know there are always questions out there."

Power users are often the first sources co-workers turn to when a computer crisis occurs, thanks to their proximity, interest and confidence in using technology. These folks' willingness to help their peers reduces the number of help desk calls, speeds response times and lets support professionals concentrate on more complex problems.

Although power users occasionally might offer wrong advice that creates more work for IT, training them properly can help keep the mundane help desk and misguided user calls to a minimum.

Southwest Airlines taps the talents of its workforce by formally training technically proficient workers whose main job isn't IT, but might be a customer service supervisor.

Dane Houliston, director of technical services for the airline in Dallas, says the company's IT department began training power users at remote locations in 1994. IT targeted workers who investigated problems for their peers and made regular calls to the help desk.

What makes a power user? Houliston says the role is voluntary and is filled by those who have an interest in IT and want

to help. "People step up to save the day, to get things working, and that's what makes a power user," he says.

With management's blessing, power users are relieved of their duties to fly

engages them to help with new installations. There's an established rapport with IT through the process, Houliston says. It's comforting to know the person can plug the cables in the right place, pull an IP address up on a screen, check connections if a computer isn't working and even verify settings.

Southwest saves money with this help from power users. Along with reducing help desk calls, such assistance obviates the need for IT to fly to remote sites as often, Houliston says.

Last month at Southwest's Albany, N.Y., location, a power user investigated and

jams and cleaned the sensors on ticket printers to keep the terminals running.

Putting power users to work also makes sense for Hilton Hotels, according to Damien Bean, vice president of corporate systems in North America for the hotel chain. Because Hilton's help desk is located at its headquarters in Beverly Hills, Calif., but the largest group of users handle finance and payroll from the Memphis, Tenn., operations center, building the skills of power users in the field makes sense.

Hilton's help desk teaches managers the basics of the payroll and finance software as part of building an on-site base of power users.

"Power users get talking about the business process and what can be done to improve it," Bean says. Educating power users who are in a position to influence means the more they know of the PeopleSoft and Oracle software limitations and opportunities, the more they can help IT streamline the business process.

Bean says IT transfers knowledge to power users who have the desire, interest and commitment to boost the skills of their colleagues. The simple questions get handled within the organization, and the more complex questions are sent to IT.

But Bean says there's a downside, too. Power users can become more engaged with IT than their normal business function. "Their skill set is so good, that they want to start rewriting programs. They're enjoying themselves that much," he says.

As for Johns Hopkins' Kale, he's had to clean up after well-intended power users who were in over their heads. At least once a month he hears about a user's problems with an older machine that isn't booting up. It turns out the user followed a neighbor's advice to delete files to free up disk space, but mistakenly dumped the boot.ini file from Windows NT.

"It's like shadow support. If it works it's great, but if it's the wrong advice, it's more work for IT," Kale says. "We reeducate them, instill the fear of God and tell them to call IT the next time they're not entirely sure what to do." ■



out to headquarters to meet with the IT staff for orientation, and for future instructions as required. An average of six people per year partake of this kind of day-long training.

Basic training covers the functionality of their location's equipment, a review of terminology used on the calls and even

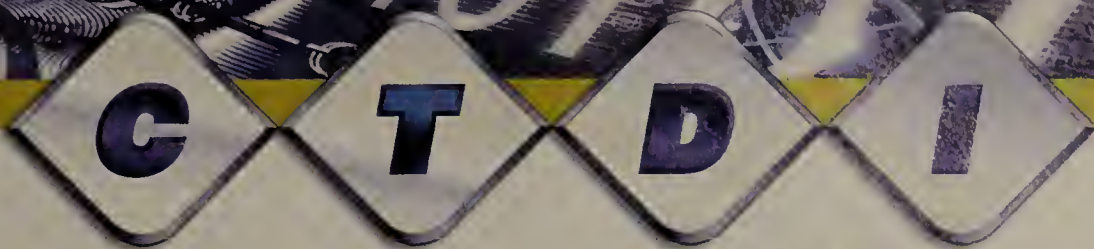
fixed a problem with a ticketing terminal that crashed when booting up. After working by phone with the help desk to verify connections and reboot the terminal, the power user installed a replacement terminal that was shipped out.

To fix other problems with ticketing terminals, the power user removed paper-

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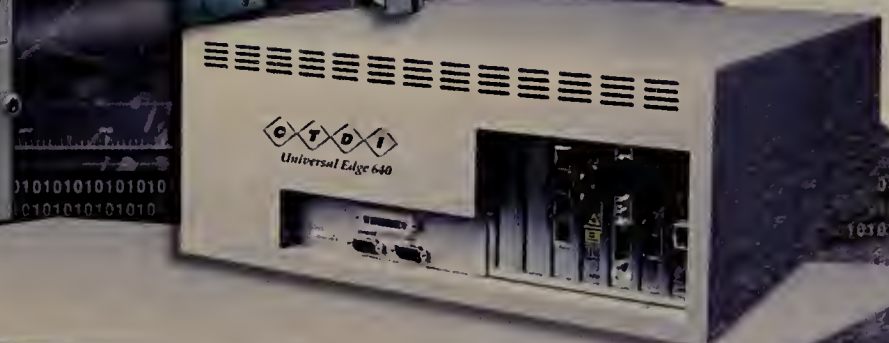
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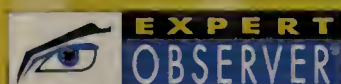
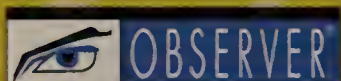
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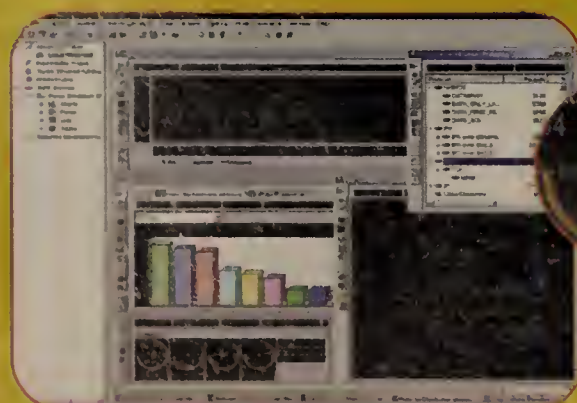
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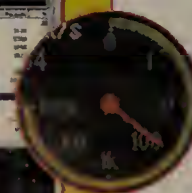
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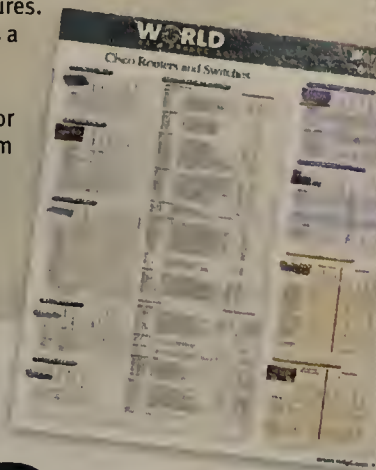
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CIGNIFY, a leading information technology company in time & attendance systems currently seeks applicants for the following position in its Atlanta, GA offices: Engineering Manager. Applicants for this position must have a bachelor's in computer science, engineering, or related field plus five years of experience in developing client/server and/or Web-based technologies and three years of experience in database design, implementation (PL/SQL or T-SQL) and tuning. Applicants should also have one year of experience in VB6.0, XML, and BizTalk/SOAP and two years of project management experience directing lower-level engineers. For consideration, please forward your resume and letter of interest by mail to: CIGNIFY Corporation, Vice President, Engineering, 7000 Central Parkway, Atlanta, GA 30328. Please do not email resumes. EOE

Bioinformatics Scientist to provide technical assist on enterprise bioinformatics software to research scientists at client sites in the U.S. & overseas. Determine & analyze user requirements & code customized solutions & automate the analysis function of software for biologists & bioinformaticians, using base scripts, Perl & Java. Assist in the design & development of software to meet the needs of the bioscience research community. Req'd. Ph.D in biology or molecular biology & 2 yrs. exp in bio-science research using bio-technology. M-F, 40 hrs/wk. Send resume to I. Sytnikov, HR, Ref #061002, InofrMax, Inc., 7600 Wisconsin Avenue, 11th Floor, Bethesda, MD 20814.

#### SOFTWARE CONSULTANT

Analyze & evaluate existing or proposed software systems. Dsgn, dvp, implmnt and improve programs, systems and related procedures to process data using in-depth knowledge of the software dvlpmnt life cycle. Encode, test, debug and install operating programs and other system software utilizing IBM operating systems, CICS/COBOL languages and DB2. BS degree or equiv. in Comp. Sci., Math, Bus., Engrng or Commerce + 2 yrs of exp. in position offered or as a Prog. Analyst, Soft. Engr or Sys. Analyst req'd. Exp. must include: a) Operating System: IBM; and b) Languages: CICS and CQBQL; c) Database: DB2. High mobility preferred. 40 hrs/wk, 8 am - 5 pm, QT as req'd, \$61,000/yr. Qualified applicants please submit resume to JS Supervisor, Greene County Team PA CareerLink, 4 West High Street, Waynesburg, PA 15370-1324. Refer to Job Order No. WEB249039.

SYSTEMS PROJECT DIRECTOR, BAAN  
Responsible for Baan ERP (enterprise wide) software projects. Plan, design, & direct Baan projects, customizing/implementing, linking to web-based custom order processing, inventory management, distribution services, virtual & actual warehousing. Oversee customizing Baan Finance, Admin & Distribution modules. Provide project management (develop budget, time schedule, evaluate projects), training, supervise consultants & contractors. Requires MS in CS or MIS & 3 yrs exp Baan systems proj. dvlpmnt; or BS CS or MIS & 5 yrs exp large database design, dvlpmnt, & implementation including 3 yrs Baan systems project dvlpmnt; exp to include 2 yrs project mngmnt or leader for enterprise-wide Baan implementation. Also requires demonstrated ability to use Baan Finance, Admin, & Distribution modules, to implement Baan on Windows NT & MS SQL Server, & to link Baan w/ standard EDI translators; knowledge of Baan Advanced Tools. 40 hrs/wk, 87-110K/yr. Send 2 resumes to: Case #20018393, Labor Exchange Office, 19 Staniford Street, 1st Floor, Boston, MA 02114

#### COMPUTER/IT

Project Eng'r, Networks. Framingham, MA. Install & maintain routers & switches. Configure routing protocols such as TCP/IP, IPX, AppleTalk, SNA, SDLC, HDLC, OSPF, RIP, RIPv2, EIGRP & BGP. Implement LAN's & WAN's. Implement security in ntwrks. using Firewalls & VPN ntwrk. devices & complete req'd documentation such as ntwrk. diagrams, Layer 2 & Layer 3 ntwrk documentation & installation rpt documentation. Provide tech. support & troubleshoot. REQUIRES: M.S. in Comp. Sci., Elect Eng'r, or related field with graduate coursework in Comp. Ntwrks. 40 hrs/wk plus overtime as needed. Mail resumes w/ ad (no calls): D. Schofield, DiData, 135 Newbury St., Framingham, MA 01701.

Axiom Systems, Inc., an enterprise technology company currently seeks applicants for the following positions in its Alpharetta, GA location: Senior Programmer Analyst - analyze requirements, design, develop and test product lifecycle management and workflow customizations of web-based applications; PDM Integration Analyst - design, develop and test seamless integration of PDM and CAD systems; PDM Programmer Analyst - analyze requirements, design, develop and test Internet-based software systems and applications. Applicants for these positions must have a bachelor's or master's degree in Computer Science, Engineering or related field plus 2-5 years of relevant experience. For consideration, please forward your resume along with letter specifying position applying for, to: Axiom Systems, Inc., Attention: Chuck Stickels, 2550 Northwinds Parkway, Suite 440, Alpharetta, GA 30004. EOE

Sr. Software Design Engr. wanted by a software/hardware dvp. Co. in San Jose, CA. Mail resume to HR, SANlight, Inc. at 50 W. San Fernando St., Ste 420, San Jose, CA 95113.

Noetix seeks Corp. Web Admin. for HQ office in Bellevue, WA. DESC: Analyze, admin, & maint. perf. & content of corp. internet & intranet sites. Install & config. web servers, netwks, site & sys. security s/w. Dsgn & dev. web & multimedia apps. that access info. stored on var. RDBMS util. SQL, ASP, XML, VBScript, JScript, & Macromedia Flash on Win o/s. REQ: BS in Engr, CS, Phys, or Math + 2 yrs. exp. admin. & maint. perf. & content of corp. internet & intranet sites; install & config. web servers, netwks, site & sys. security apps; dsgr & dev web sites & web apps. to access info. on RDBMS util. SOL, ASP, VBScript, JScript, & Win. Plus 1 yr. exp. dsgr. & dev. multimedia apps. util. Macromedia Flash. Prem. sal. + benes. Pls. reply to J. Hubbs, Job #NC-105, 2229-112th Ave NE, Ste. 200, Bellevue, WA 98004.

#### SALES MANAGER

Pelco, Closed-circuit TV Manufacturer, located in Clovis, CA is hiring:  
**Strategic Accounts Manager (Sales Manager)**  
Job requires travel throughout the U.S.  
**REQ:** Bachelor's degree or equiv. in Bus. Admin., Marketing or related field (in lieu of Bachelor's, will accept 3 yrs exper in job, mktng, or rel.) +5 yrs exper in CCTV & video equip industry, incl. 3 yrs marketing exper w/ customer strategies. Resumes to: Pelco, HR, Attn: Kathy Tucker, 3500 Pelco Way, Clovis, CA 93612 or email to [HR@pelco.com](mailto:HR@pelco.com). Affirmative Action/EOE.

Software Developers, Gaithersburg, MD. Analyze, design, develop, integrate, test, implement & maintain business applications in internet architecture using Lotus Domino, DB2, DECS, XML, Java, Javascript, DHTML, AS400, and MQSeries. Train clients in the use & operation of new applications. B.S. in C.S., Math or related & 5 yrs rel. exp. including 3 yrs exp. with DB2 or RDBMS. Experience with Lotus Notes/Domino, Java, and Customer Relationship Management/Sales Information System. 40 hrs/wk. Resume to B. Smith, HR #18, Softelcomm, Inc. 849-C Quince Orchard Blvd, Gaithersburg, MD 20878.

Software Engineer/Developer needed to assist in building an SAP EH&S R/3 system. Requires Masters Degree in Engineering or related field and 2 years experience in software development which may precede Masters Degree. Resumes to: Human Resources, Enterprism Solutions, 1 Little Falls Centre, Ste. 110, Centerville Rd., Wilmington, DE 19808. Refer to job code: BDBC

Systems Analyst wanted by FL based Co. Must have Master's degree in Comp. Sc. or Engg., 2 yrs. of exp. in Comp. S/W dev. and/or cons. Must have proficiency in RDBMS, VB, VS, Weblogic, XML. Respond to: GSNP Corporation d/b/a Howard Johnson, 3314 S. Dale Mabry Hwy., Tampa, FL 33629. (Ref. GG 8205). No phone calls.

Project Mgmt Analyst (Brunswick, New Jersey): Manage, coordinate & analyze activities re info. Tech. & internet-based projects. Determine project costs, requirements, etc. Requires: 2 yrs. exp. in job offered or 2 years exp. as a mgmt execut. or a related position with same duties and \*Bachelors in Business Admin or a related field. \*Will accept bachelor's in a combination of college level education and experience. Exp. ref. required. Salary: \$68,000/yr. EOE. Send resume to: Vertex Soft, Inc., 622 Georges Road, Ste. 104 N. Brunswick, NJ 08902.

#### Baan Tools Specialist

You will be responsible for requirements analysis & Baan ERP implementation to support sales, marketing & manufacturing. Ideal candidate will have Bachelor's degree in C.S. or related field with at least three years experience in Baan ERP systems implementation in UNIX & NT environment. Send resume to HR Manager, Stonhard, Inc., P.O. Box 308, Maple Shade, NJ 08052, FAX: (856) 321.7525, [www.stonhard.com](http://www.stonhard.com), EOE, M/F/H/V. No phone inquiries.

Programmer-Analyst for specialty wire and cable manufacturer in Fort Mill, South Carolina. Minimum two years experience developing, designing, coding, analyzing and implementing commercial system applications using JAVA, XML, and DHTML, performing debugging and unit testing on applications to eliminate errors and ensuring quality operations. Requires Bachelor of Science degree in Computer Science. Send resume to Recruiter-PA, Belden Wire & Cable Company, 793 Fort Mill Highway, Fort Mill, SC 29715.

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Sr. Systems Analyst wanted by NJ based Co for job loc throughout the US. Must have Bachelor's degree in Comp. Sc. or Engg., 2 yrs. of s/ware exp. & proficiency with Linux, Telecom & network security protocols, Firewalls, VPN, SMS. Respond to: Atinav, Inc., 100 Franklin Sq. Dr., Ste. #304, Somerset, NJ 08873. (Ref. GG 8244). No phone calls.

Programmer wanted by Financial Software & Sys'ts Dvlpr in MA. Dvlp & maintain testing procedures; doc on-line ref materials; provide in-house customer support; write functional specs for programming; dvlp new systs. BS in Comp Sci & 2yrs exp in job offered req. Respond to: Office Mngr/SunGard, 2 Adams Pl, 4th Fl, Quincy, MA 02169.

Programmer-Analyst/DBA to design, analyze, develop, code, test, optimize, implement, & provide user support for various applications using VBScript, JSP, Java and HTML. Design & create Oracle 8 tables, triggers, databaselinks, constraints, indexes, and PL/SOL stored procedures and packages. Work with Windows NT, Unix, Oracle Discoverer & MS Access 2000. Req'd: B.S.C.S. & 5 yrs Exp. M-F, 40 hrs/wk. Freq. reloc. within the US may be necessary. Resume to J. Brigham, HR #061002, 6992 Columbia Gateway Dr., Columbia, MD 21046.

Systems Analyst wanted by NJ based Co for job loc throughout the US. Must have Master's degree in Comp. Sc. or Engg., 2 yrs of s/ware exp. & proficiency with Bluetooth, UPnP, JDBC, JAVA & Visual Basic. Respond to: Atinav, Inc., 100 Franklin Sq. Dr., Ste # 304, Somerset, NJ 08873. (Ref. GG 8208). No phone calls.

Systems Analyst/Programmer wanted by Software Dvlpm't firm in Bklyn to dvlp & upgrade s/ware applcs. Bach degree req'd. Respond to: A-Plus Systems, Inc., 6604 Bay Parkway, Brooklyn, NY 11204.

Systems Administrator wanted by Home Care agency in Elk Grove Village, IL. Req'd: Bachelors in Computer Science or Electronics or Communications Engineering. Send resumes to: HR, Caring Home Care Services, Inc., 1881 Commerce Drive, Unit 107, Elk Grove Village, IL 60007. No calls please.

PROGRAMMER/ANALYSTS wanted by hardware/software co. in Houston. Must have degree & exp. Respond by resume only to: Mr. S. Ryu, J/H #10, Computize, Inc., 1008 Wirt Rd., Ste #150, Houston, TX 77055.

Program'rs/Analysts: Analyze, plan, dvlp & test sw applic'n's for cable communica'n industry; Evaluate user request to program & modify applica'n w/VC++, JDK1.2, Corba, AnsiC++ on PowerTV/NT Platform. 40h/w, 8-5, BS or foreign equiv'l't & 1-yr wk exp in any position involv'g JDK1.2 & PowerTV. Resume to J. Bhasin, Itaas, Inc. 4530 S. Berkeley Lk Rd. #A, Norcross, GA 30071/email: jaspal.bhasin@itaas.com

Software Engineer wanted w/BS & 2 yrs. exp. in San Jose, CA. Send resume to: HR Dept., Scicom Americas, Inc., 1500 S. Dairy Ashford, Ste 241, Houston, TX 77077

Several computer related positions available for large transportation and logistics services company. Degree, technical skills & experience vary per positions. Send resume to: [vivianirizarry@ups.com](mailto:vivianirizarry@ups.com) or United Parcel Service, P.O. Box 833, Mahwah, NJ 07430, Attn: Vivian Irizarry, A-563, Ref. #1. Employer will not sponsor visas for position.

A high-tech company is seeking the following Software Engineers who will collaborate in the research, design & development of next-generation storage network systems. Req'd: Software Engineer #1: Master's in CompSci. Min 1yr exp as Software Engineer/Researcher. Must have research and/or project exp w/Active Networks & network programming. REF#20065-1 Software Engineer #2: Master's in CompSci. Min 1yr exp as Software Engineer/Researcher. Must have research and/or project exp w/design & development of IP protocol stacks. REF#20065-2 Software Engineer #3: Master's in CompSci. Min 1 yr exp as Software Engineer/Researcher. Must have research and/or project exp w/network security & access control in IS. REF#20065-3 Send res. to: Anne Budowsky, Nextorage, Inc., 520 8th Ave., 21st Fl., NY, NY 10018. PLS INDICATE REF#.

**SOFTWARE CONSULTANT** Analyze & evaluate existing or proposed software systems. Dsgn, dvlp, implmt and improve programs, systems and related procedures to process data using in-depth knowledge of the software dvlpm't life cycle. Encode, test, debug and install operating programs and other system software utilizing knowledge of RDBMS environments and PowerBuilder. B.S. degree or equiv. in Comp. Sci., Comp. Sys., Math, Engrng, Bus. or Commerce + 2 yrs of exp. in position offered or as a Prog. Analyst, Sys. Analyst or Soft. Engrn req'd. Exp. must incl: a) Oracle, Sybase or SQL Server; and b) PowerBuilder. High mobility preferred. 40 hrs/wk, 8 am - 5 pm, OT as req'd, \$61,000/yr. Qualified applicants please submit resume to Manager, Washington County Team PA CareerLink, Millcraft Center, Suite 150LL, 90 West Chestnut Street, Washington, PA 15301-4517. Refer to Job Order No. WEB249035.

Business & Information Systems Administrator. Administer and manage company information structure. Perform all IS related functions. Support, maintain, and enhance current JD Edwards ERP system to achieve business strategies and objectives. Create, maintain, and distribute business reports from ERP system. Design and maintain company custom software. Oversee and perform all IT related functions. Position is located in York, Nebraska. B.S. degree req'd (or equiv. education or experience) w/ major in Comp. Sci. or related field. 5 yrs of experience req'd. Must have proof of legal authority to work in the United States. Send resume to Joe Kardos, 15159 Andrew Jackson Hwy 76 West, Fair Bluff, NC, 28439. This advertisement is paid for by the employer.

Authorware Dev/Senior: Work w/pioneer in field of applying computer technology to workforce training in North Jersey, standard benefits + tuition reimb., no pd. relocation. Code Macromedia Authorware (v 3.5+) proj., convert & add changes for existing proj. to highest version of s/ware. Prgm. extensions to incl. missing functions, use MS Visual C/C++ Developer Studio on Windows interface to prgm. critical functionality unavailable in Authorware, compile/draft/maint. s/ware doc. Must demonstrate working knowledge w/Authorware dev. environ. & pgmmg. Principals only reply to Dept. DP, ISI Inc., 411 Hackensack Ave., Cont. Plz II, Hackensack, NJ 07601.

Advantecs has openings for application developers for mainframe and Database administrators for Oracle/DB2 for its various locations in US. Must have at least 5 years experience in the following areas:

**Mainframe Application Developers:** Exp in online/batch programming using COBOL, JCL, CICS, DB2 & VSAM. Must have problem solving exp in using mainframe debugging tools. Exp in programming client server applications with mainframe as server a big plus.

**Oracle / DB2 DBAs:** Exp in setting up and supporting production in Oracle/DB2 environment.

All the positions require good analysis, problem solving and communication skills. Some positions also require Bachelor's degree. Others require Master's degree, equivalent degree and experience s also accepted. Excellent pay and benefits. Please indicate the position applied for. Mail resume to HR Dept, Advantecs Group Inc, 1430 Oak Tree Road, Suite F, Iselin, NJ 08830.

Computer Professionals (Multiple Positions) w/exp in: Cobol, DB2, CICS, IMS, MVS, JCL, ERWin, Delphi, NFS, NIS, DHCP, HACMP, Raid Arrays, Pro\*C, C, C++, VC++, HTML, Perl, Veritas Volume Manager, Bourne, K Shell, Java, Java Script, ASP, Corba, EJB, JSP, Swing, AWT, Weblogic, WebSphere, Servlets, COM/DCOM, IIS, EDI, .Net, Active X, AIX, WinRunner, Peoplesoft, Peoplecode, Veritas, Sun Cluster, NetBackup, HP Open View backup, Linux, Unix, HP-UX, AIX, DOS, Windows NT, VAX/ VMS, VB, PB, Sybase, PL/SOL, T-SOL, ODBC, JDBC, MS SQL Server, SOL\*Plus, SOL\*Loader, Oracle, Datawarehouse, Forms, Reports, Oracle DBA, Oracle RDBMS, Dyntax/Pix, Oracle Apps (GL, AP, AR, OE, BOM, PO, HR, INV) Oracle Financial Applic., Oracle Designer, MS Access, Excel, Cisco Router, Windows NT, DOS, Sun Solaris Cluster, Sequent Server, Aries Servers, Sun Solaris system & Network Admn., SUN, SUP Servers, ACL, TCB, Developer 2000, Designer 2000, Rational Rose, Numega bounds Checker, True Coverage, True time, OOAD, MFC library, SEI-CMM, ERWin and related tools. Apply to: STG, Inc., 3340 Peachtree Road, Suite #1800, Atlanta, GA 30326. E-mail: [iresumes@stgll.com](mailto:iresumes@stgll.com)

Applications Developer (Norcross GA) - Research/design/analyze/develop software, write instructions using C/VB/JavaScript/WinRunner/PL/SOL/Adobe/HTML/MS Visual Studio/source control tools/Object-oriented program. & tech. & MS SOL. Bachelor's degree or foreign equiv. in CS, MIS, CIS, Engineering, or related req'd. Must be proficient in C/VB/JavaScript/WinRunner/PL/SOL/Adobe/HTML/MS Visual Studio/source control tools/Object-oriented program. & tech./MS SOL. \$57,750/yr. 40+ hrs/wk, OT as need. Send resume to: M. Powers, HR Adm., REF#SN, CoreCARD, 1 Meca Way, Norcross, GA 30093.

ERG is looking for Dir of Development/Info Systems to estab & run technical teams for MS Great Plains (MSGP) Value Added applic. Must know basic acctg principles & tech. needs of acctg firms. Customize solutions using MSGP Dexterity. Assist project mgrs in systm dsgn, incl General Ledger, Receivables & Payables. Recruit staff & run wkly meetings. Manage tech. & prof dev. BS in Comp Info Sys or related field. Min 5yr exp Certified MSGP Dexterity Engineer or proven exp w/Dexterity. Salary based on exp. Resume to ERG, 3430 American River Dr., Ste 200, Sacramento, CA 95864 or email [ckaeser@enterprise-resource.com](mailto:ckaeser@enterprise-resource.com) Attn: Janet Kaeser.

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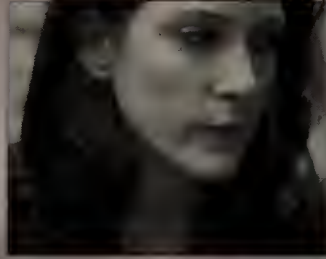
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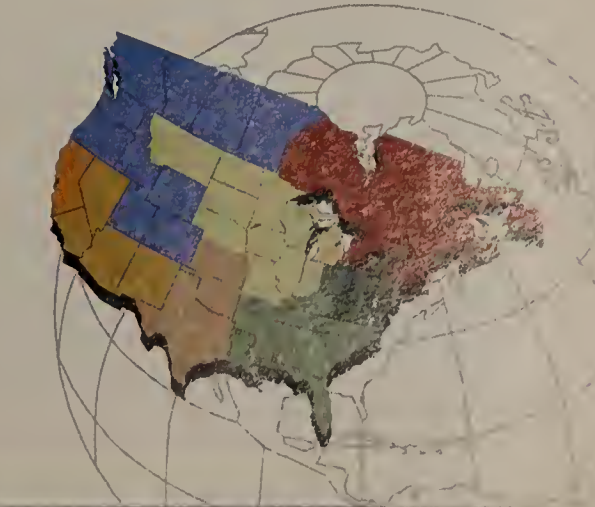
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# Survival is key message at SuperComm show

Event is more about reemergence from downturn.

■ BY TIM GREENE AND JIM DUFFY

ATLANTA — Despite the best efforts of vendors to hawk their wares, attendees at last week's SuperComm were more concerned with lifelines than product lines.

The buzz at the show, which is largely geared toward service providers, had more to do with surviving the current downturn than it did with the next big technology or innovation. There were plenty of product announcements, but virtually all were of marginal importance as vendors chose not to cause a stir in an environment where customers are not spending and companies are shedding hundreds of thousands of employees.

The slump in attendance at SuperComm reflected the slump in the industry. Attendance was off 30% from last year, from 52,822, to just less than 37,000. Exhibit space was down by 37,490 square feet, although show officials said there were only 28 fewer exhibitors than last year.

Edge router start-up Allegro Networks did not exhibit at SuperComm, but hosted a wake for the telecom industry that

ed some merriment with a keynote that featured much good-natured ribbing with a Cisco employee demonstrating Internet applications that could raise the profile of service providers with their customers, and Cisco's fortunes in the service provider market.

Cisco got down to business, rolling out 10G bit/sec Ethernet and Dynamic Packet Transport interfaces for its 12000 series Internet routers. Cisco claims to be the first to market with a routed 10G bit/sec Ethernet interface.

Other announcements at the show included:

- Lucent's high-density APX 8100 universal gateway, which is designed to let service providers deliver dial-up IP remote access and voice-over-IP services for their business and residential customers;

- Nortel's addition of software to its Shasta 5000 Broadband Services Node that lets the box terminate IP-Security VPN tunnels from the same VPN clients that are used with Nortel's Contivity gateways, and supports network-based virus scanning and intrusion detection;



**“It seems the industry needs a little levity and some new applications to get it out of its doldrums.”**

**Craig Barrett**  
CEO, Intel

featured a tombstone engraved with the names of defunct companies and a coffin filled with beer.

“It's like we're in a lifeboat, there's no food, there's no water and everybody's waiting to see who'll still be alive when the supply ship comes,” said Daniel Briere, CEO of TeleChoice and a *Network World* columnist.

Some followed Allegro's lead and tried to find the lighter side of the landscape. Intel's CEO Craig Barrett used a video of himself in a black suit and dark glasses as the introduction to his keynote address. The video seemed to trace him traveling via the Internet from Intel's California headquarters to SuperComm.

“It seems the industry needs a little levity and some new applications to get it out of its doldrums,” Barrett said after materializing onstage.

Cisco CEO John Chambers also inject-

- Sycamore Networks' enhancement to its SN 3000 grooming switch, which conserves bandwidth by packing data onto the ring in 50M bit/sec increments. Without this capability, traffic may not fill up 155M bit/sec and 622M bit/sec pipes and bandwidth would be wasted.

- Extensions to Tellabs' 5500 and 6500 cross-connects that let service providers eliminate the need for stand-alone add/drop multiplexers at the hub and end-office locations, and increase network density for operating cost and floor-space reductions of 50% and 80%, respectively. Tellabs 5500 digital cross-connect systems currently handle 75% of all network traffic in the U.S.

A group of vendors also used the show to launch an initiative called the Service Creation Community. The group includes Microsoft, Siemens and ADC Telecom. ■



## Cisco's chief surveys carrier market

*The percentage of Cisco's revenue from service providers has been halved during the current downturn, from just over 40% in 1999-2000, to the mid- to low-20% range now. Yet a market research firm just disclosed that Cisco sells more telecom gear than any other company, including*

*the traditional suppliers. But Cisco still has room for improvement, as CEO John Chambers discussed in an exclusive SuperComm interview with Network World The Edge Managing Editor Jim Duffy.*

### What's your assessment of the state of Cisco's service provider business?

If we were to have said three years ago that we were [going to be] the No. 1 telecommunications player in the world (according to Synergy Research), and that we would have enjoyed the industry's best cash, profits and market cap, no one would have believed us. And yet that's what we've been able to do over the past three years. At the same time, this downturn has been humbling to us all, and that's when you do the soul searching and say what do you need to do better. So where we've done well is when we've been customer-driven. Where I've gotten in trouble is where we've made the mistake in thinking we knew more than the customer did. That was true in [our dealings with] the [incumbent local exchange carriers] and the [post, telegraph and telephone administration]. We spent the last year and a half recovering from that. The one company that may come out of the downturn in a dramatically different position is Cisco.

### So is the downturn directly related to your success in the service provider business?

The downturn gave us a chance to change [and do] what we needed to do better in the service provider market. Where we weren't close enough to the operational people at a BellSouth or Verizon or SBC, we've rebuilt those relationships. In fact, we never really had them. You've got to earn the trust of the operational people and be driven by the operational side.

### So that's the mistake you alluded to in your SuperComm keynote address?

Yes. It started off that way, we got too far away from it, paid a terrible price for it, and now we're back. This market is coming to the service providers if they execute properly. Even in the hot growth areas, many of the enterprise customers would like to outsource. But they don't want just transport. What they really want is to get value on top of that. How this evolves depends on how quickly service providers transform themselves but also, using Cisco as an example, with our clear leadership position in the enterprise, how effectively we work with service providers and learn from each other.

### In addition to being customer-driven, particularly with the ILECs and regional Bell operating companies, what else do you need to do to partner with them?

We have the potential to be a true business partner; the CEOs [at the carriers] get that. They realize that what we bring to the relationship is much more than being a supplier. Within the supplier ranks, it's do you provide one or two pinpoint products, or do you provide an architecture that protects their investment? That's what the opportunity is in front of us. The real question is, can we be as effective with the service providers as we were in the enterprise? In the enterprise, our market share is above 60%; in the service provider market, we're in the single digits. So the opportunity is there if we execute right.

### How are they accepting that proposition?

I have to be very careful how I say it. With proper balance and humility, I have to say this is our joint opportunity. I think most of them would agree.

### Are you getting positive feedback from the ILECs and RBOCs?

See Chambers, page 53



## VoIP

continued from page 1

ICS 7750-DV with eight digital PSTN trunks, and eight digital fax and conferencing device lines. The packages are available for \$12,000 and \$19,000, respectively.

The ICS 7750 package installed at Quay, a high-tech components manufacturer in Eatontown, N.J., recently replaced an aging Lucent small-office PBX that was becoming too cumbersome to manage.

"The cost for doing moves, adds and changes is much lower compared with our legacy PBX," Roessler says.

For deploying new desktops, Roessler says the converged network also reduces the cost of running cable in half because only one line for Ethernet needs to be run instead of separate voice and data wires. While savings are difficult to quantify, Roessler estimates he lowered the overall maintenance costs for maintaining the company's voice system by 18% with the Cisco ICS 7750.

Going against Cisco's forays into the market for small and midsize VoIP customers, 3Com is announcing this week a software upgrade for its SuperStack 3 NBX device that increases IP handset support to 1,500 IP phones — twice as many as the previous version. 3Com says a memory upgrade on the NBX in addition to the software upgrade could be required to support 1,500 devices — 3Com recommends 515M bytes of RAM on the box. Release 4.1 of the NBX software, which will be a free upgrade to 3Com NBX customers, also will

include Web browser access to the NBX's unified messaging voice/e-mail server, allowing users to access voice mail and e-mail through a Web browser.

As 3Com and Cisco appear to be straying from their VoIP bread-and-butter IP telephony bases, some analysts say the use of VoIP by smaller companies has the best payoff.

## VoIP fear factors

**A survey of 500 Network World readers found these top concerns about IP telephony:**

1. Quality-of-service assurances
2. Immature standards.
3. Cost of equipment and installation.
4. Increased risk of downtime.

SOURCE: NETWORK WORLD 500 SURVEY

"Small and medium businesses [are] the bulk of the marketplace. A significant amount of implementations [of Cisco VoIP gear] are small sites already," says Elizabeth Ussher, vice president for convergence at market research firm Meta Group. Ussher says Cisco's value-added reseller (VAR) network will help it in the smaller VoIP markets. "The number of Cisco VARs [that serve midsize] customers is huge ... a smart move."

Sales of IP PBXs and phones reached \$1 billion last year, while the average VoIP deployment was around 70 seats per system, according to Cahners InStat/MDR — numbers which bode well for Cisco's push into the small- and midsize-business market.

A report on the new Cisco small-business convergence offerings from Current Analysis e-business infrastructure analyst Brian Riggs also praises the vendor's move into small and midsize companies.

With the new products, "Cisco is able to compete in a [small and midsize enterprise] packet telephony market that has, for all intents and purposes, been closed to it," Riggs says. However, he says, while Cisco will tap a market in which a majority of IP telephony purchases are made, the pricing for the MCS 7815-100 and ICS 7750 bundles — around \$600 to \$800 per user — could scare away some smaller customers with tight budgets.

As for 3Com scaling up its IP PBX support, Meta Group's Ussher says the challenge to move up the ladder to large-enterprise customers will be significant, partly because of the company's past strategic missteps. "That's going to be a tough one for them on the voice side," Ussher says of 3Com, as some large corporations still remember the vendor's exit out of the business of selling high-end network gear several years ago. "It will be hard [for 3Com] to go back to those large enterprise customers and say, 'Hey, we're back and we have a high-end voice solution for you.'"

Meanwhile, at SuperComm in Atlanta last week, smaller-office IP PBXs based on the emerging SIP standard were on display from two vendors with disparate telephony backgrounds. SIP performs basic call-control tasks such as session setup and tear-down, and controls other signaling for features such as hold, caller ID and call transferring.

Mitel — a maker of traditional circuit-switched PBXs — and Pingtel — which sells SIP-based IP phones — each announced converged telephony boxes for sites with 10 to 500 seats. Mitel already sells H.323-based IP PBXs.

Pingtel's SIPxchange IP PBX is based on the SIP VoIP protocol — rather than the H.323 protocol, as implemented by 3Com and partly by Cisco. The company's first entry into the switching arena, SIPxchange can provide call control, voice mail, interactive voice response and a browser-based system management. The box also supports applications using XML, Java and voiceXML.

The SIP stack running on SIPxchange lets the box support Pingtel Expressa SIP phones, or

other SIP-based phones from companies such as Cisco and Siemens. Windows XP clients using the SIP-based Windows Messenger application also could attach as a client to the SIPxchange server. SIPxchange is slated to be available in the fall for around \$600 per seat.

Mitel showed a SIP-based office device that acts like an IP telephone key system, file and application server, print server and firewall. The 3050 Integrated Communications Platform features two Ethernet ports, one to attach to a LAN switch and one to attach to a WAN access device such as a DSL box or cable

modem. The 3050 is scheduled to be available in the fall for \$1,900, and the 5055 SIP phone will be available later this month for \$350.

"SIP really is a better standard for enterprise VoIP," says Brian Strachman, an analyst with Cahners InStat/MDR. "The rest of the industry uses H.323 for the most part, but it is not as well-refined a standard as SIP."

*Senior Editor Tim Greene contributed to this report.*



Get more information online.  
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www.nwfusion.com

## Q A

## Chambers

continued from page 52

We're in the best shape we've ever been in with the ILECs, RBOCs and PTTs. Not to say we can't do better.

## Where is Cisco particularly challenged in the service provider arena?

It's not as much in our product capability. It's with the operational people in the accounts. We have not built the relationships there and [weren't] being customer-driven by them. That's where we had the biggest hurdles. Those are the decision makers for the equipment.

## Cisco seems to be virtually invisible in circuit-to-packet migration. That business seems to be going to the Nortels and the Lucent.

You've got to say what are the real markets and what are the transition markets. Just like we made a decision in the enterprise: When we started to move from routing into LAN switching, a lot of people said we've got to go to hubs. And we decided not to because we thought that was a temporary market that was evolutionary. What you just outlined is a very similar decision; time will tell if we were right or wrong.

Right now, we see [service providers] using the gateways to get their traditional pricing down. We've seen the traditional players you've mentioned doing almost anything to hold on to the business, which is a nice way of saying we'll take all the profits out of the market. We're more interested with how you ... protect your customers' evolution than we are in going into a market, like the hub market of prior times.

## Upstart carrier Velocita filed for Chapter 11 last week. Cisco had a major investment in this customer. Was that a mistake?

You want to think of this being a race track. Nobody even qualifies for it if they can't drive very, very fast. Nobody wins these races by driving with a foot on the brake. Will Cisco continue to take business risks? Absolutely. Have we been conservative in accounting for the business risks we take? Absolutely. You're going to have misses. What you do is learn from each one and say what do you do differently, and get better and better at that. You've got to really focus on profitability from the beginning.

If you're going to potentially be the No. 1 player in both service providers and enterprise by a lot, by definition you've got to take some risk. Some will work, some will not. The potential is there for 40% to 50% of our business to come from service providers. I personally would be surprised if that did not occur. ■

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## BackSpin Mark Gibbs



### Flak in the mail

I received a certain amount of flak about my recent Gearhead column about an e-mail client called IncrediMail.

First, the URL of the vendor's site got mangled to incredimailxe.com rather than the correct incredimail.com. Unfortunately incredimailxe.com belongs to a Los Angeles company named Targetwords.com.

To those who wrote complaining that Gearhead was in league with the devil for printing a URL that pointed to a crassly commercial site, all I can say is, so sue me.

But that flak was slightly overshadowed by what I caught for Gearhead having the temerity to suggest that HTML mail (h-mail?) might be a good thing. Just check out Scott Bradner's column this week (see page 22) wherein he writes, "I hope that [Gibbs] will not send me pretty e-mail when he sees this column because he will get the letter back unread."

Reader Reed Darcy wrote: "I had thought that an old-timer such as yourself would be against further cluttering the Internet with HTML e-mail." Long-time reader and frequent correspondent Phil Daley opined that, "The thing that you did mention, fripperies, is totally useless to anyone other than a newbie or a total jerk."

Gentlemen, such anger and disgust! Since when

does HTML mail qualify for the level of opprobrium one might bestow on, say, Pat Robertson?

Bradner lists some security and privacy issues that are associated with HTML mail, but in reality it is not HTML mail that is the real problem. The real problem lies in the way that e-mail clients are implemented and configured.

For example, in his column Bradner refers to what I think is called the Reaper Exploit, a hack that was publicized in 1998 by Carl Voth. He describes how JavaScript routines in HTML mail could copy the contents of e-mail messages to a third party.

Thus, if you send me HTML mail that implements the Reaper Exploit and I forward it with a comment to someone else, when the message is opened and rendered, the JavaScript will be executed and the message forwarded back to the original sender, or wherever it is meant to go.

Well, this hack is real and will work — at least as long as the receiving e-mail client lets JavaScript execute. But who would allow such a thing? For example, in Microsoft Outlook (I can imagine Bradner shuddering at the mention of the product), there are easily accessed security settings that even a newbie can use to disable scripts and ActiveX controls.

"Ah," I hear some of you say, "But newbies abound and have not the wit to deflect the slings and arrows of outrageous hacks! Outlook and its kin-

dred HTML-rendering spawn from hell should be purged from the face of the 'Net forthwith!" To which, I must first say, you've been reading way too much Shakespeare. Secondly, so what? There will always be newbies, and IT's job is to protect and educate them so that they can do whatever job they are supposed to do.

But above and beyond the security and newbie issues, that e-mail clients might be run while improperly configured doesn't mean that HTML mail is bad. I suspect a certain amount of reactionary thinking here, as some of the comments about the unnecessary "prettiness" of HTML mail seems more in line with the old school attitude of the 'Net geeks (you know, those guys who wear the T-shirts that read "The Internet is full, go away").

What I like about HTML mail is that e-mail stops being flat and dull. You want something to put the newbies off? Just load 'em down with an in-box full of boring plain-text messages. It's bad enough that most people put so little care in the e-mail content, but to have to read badly written and ugly messages is adding insult to injury.

I contend that HTML mail is something we need more of and if people would get their security settings sorted out, it is quite perfectly safe.

*Beautiful fripperies to backspin@gibbs.com.*

## 'NetBuzz News, insights, opinions and oddities



By Paul McNamara

### HP apologizes for TV commercial, but . . .

Hewlett-Packard says it's sorry. Not so sorry that the company will stop airing the TV commercial that has infuriated many readers of this column — at least not yet. More like the obligatory kind of sorry you'll hear from politicians after they mash their toes against their tonsils.

"I personally want to apologize," says Caron

Kushner, HP's worldwide advertising manager. "We never meant to cause this reaction. . . . It's very bad publicity for us, and we have a high enough profile right now as it is without adding to it."

Add to it they have, however.

In case you're just tuning in, the commercial makes men look like idiots — as so many commercials and sitcoms do these days — by showing a guy searching for items off a "shopping list" that we later see is a collection of photographs printed by his wife. The punch line: "A shopping list that won't confuse your husband."

A critical column here two weeks ago (www.nwfusion.com, DocFinder: 9760) triggered an avalanche of e-mail from men and women who have had their fill of this mindless stereotyping. We shared some of that e-mail last week (DocFinder: 9759).

(An aside: A few readers have written to suggest that this subject isn't important enough to warrant a public airing. Objection noted . . . and dismissed. In 20-plus years of writing columns, I have never seen this volume of reaction to any other topic. A lot of people care passionately, even if you might believe they shouldn't.)

Exactly how many are mad at HP remains open to interpretation.

"Twenty million people in North America have seen the spot, and I've gotten about 30 million e-mails," Kushner says. "But I don't know if that's indicative."

I assured her it isn't, having personally received more than 100 e-mails with at least one asking the commercial out of bounds. More than a few writers said they're done

buying HP products.

(Another aside: A handful of you have written to call those of us who are complaining "whiners." Lighten up, we've been told, turn the other cheek. . . . In other words, go on being a bunch of wimps. . . . No, thanks.)

Kushner says she finds the negative reaction surprising in part because HP showed the commercial to focus groups here and abroad before putting it on air.

"People thought it was funny . . . a twist on the traditional cliché of women shopping," she says.

Just goes to show the value of focus groups.

One test audience did request a change in the commercial script.

"People in Germany wanted the husband to be overweight and to have a beer belly, and we said we wouldn't do that because we felt that was a stereotype maligning men," Kushner says.

In other words, the company decided that poking fun at fat men would be wrong, so instead it poked fun at *all* men.

(One last aside: Those of you who have suggested that men deserve this treatment as retribution for past discrimination against women need to ask yourselves if that's a value you want to pass on to your children.)

Finally, many of those objecting to the ad have wondered whether HP CEO Carly Fiorina would have aired such a commercial had it portrayed a woman as the person too dumb to shop without pictures.

"That's a really good point," Kushner says. "And actually, Carly does see all the [commercials] and does approve all the work. I've heard that, too, that if it was reversed and it was a woman would we get a barrage of letters from feminist groups? Most likely, we would."

So is there any chance the company might can the commercial?

"We're tracking it," Kushner says. "Obviously, if [the complaints] become ubiquitous we would pull the ad."

*You haven't weighed in yet? What's wrong? The address is buzz@nww.com.*





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